Note to Reader: Due to a typographical error, the CFI - institution and foundation ratio on page 973 has been updated from 3.78 to 4.43 to match the APA report in Attachment C which begins on page 974.

BOARD OF VISITORS

MEETING

March 21-22, 2021

Virginia Polytechnic Institute and State University
Board of Visitors Meeting Schedule
March 21-22, 2021

**Sunday, March 21:** Attire is business casual. All activities are at The Inn.

10:00 – 12:00 p.m. **Selection Committee** meets in Closed Session in the Solitude Room, to interview student candidates.

12:00 – 1:00 p.m. **Selection Committee** deliberates in Closed Session over lunch in the Solitude Room.

12:00 – 1:00 p.m. **Lunch** for other Board members and invited administrators in the 1872 Salon.

1:15 – 3:00 p.m. **Information Session for the full Board** in Latham Ballroom A/B
Agenda includes Innovation Campus presentation, annual legislative session review, Pathways presentation, and constituent reports (Open Session)

3:15 – 6:00 p.m. **Finance & Resource Management Committee** meets in Open Session in Latham Ballroom A/B
All Board members are urged to attend.

6:30 p.m. Dinner at Preston’s/1872 Salon/Old Guard Salon for Board members and invited administrators.

**Monday, March 22:** Attire is business casual. All meetings on Monday are at The Inn. Check out of room before lunch and leave luggage at the front desk. BOV members will have breakfast on their own at The Inn. *(Preston’s dining room will be open from 7:00 to 9:00 a.m. for BOV members only.)*

7:00 a.m. **Compliance, Audit, & Risk Committee** meets in Closed Session over breakfast in Old Guard Salon

7:50 a.m. **Buildings & Grounds Committee** will assemble in the lobby of The Inn for a tour of the Creativity + Innovation District. **Bus departs promptly at 8:00 a.m.**
All board members are welcomed to attend.

8:30 a.m. **Academic, Research and Student Affairs Committee** meets in Closed Session in Latham Ballroom CDEF

9:00 a.m. **Academic, Research, & Student Affairs Committee** meets in Open Session in Latham Ballroom CDEF

9:30 a.m. **Buildings & Grounds Committee** meets in Open Session in Latham Ballroom A/B

10:00 a.m. **Finance & Resource Management Committee** meets in Closed Session in Solitude Room

10:45 a.m. **Buildings & Grounds Committee and Finance & Resource Management Committee** meet jointly in Open Session in Latham Ballroom A/B

12:00 p.m. **Governance & Administration Committee** meets in Open Session over lunch in the 1872 Salon

12:00 p.m. **Lunch** for Board Members and invited administrators in Preston’s/Old Guard Salon

1:15 p.m. **Full Board Meeting** in Latham Ballroom

4:00 p.m. (time approximate) Meeting adjourns. Board members depart Blacksburg.
INDEX – Board of Visitors Meeting – March 21-22, 2021

Cover

Cover, Index, Membership Listing, Committee Assignments

Tab A

Information Session Agenda – Sunday, March 21, 2021

Tab B

Open Session Agenda – Monday, March 22, 2021

Tab C

Approval of Consent Agenda Open Items
• Ratification of Minutes from October 21-22, 2020 BOV State Council of Higher Education for Virginia (SCHEV) Orientation Meeting
• Approval of Minutes from November 16, 2020 BOV Meeting
• Approval of Minutes from March 8, 2021 Public Comment Period
• Report of Information Session – Sunday, March 21, 2021
• Academic, Research, and Student Affairs Committee General Report – Monday, March 22, 2021 Meeting
• Buildings and Grounds Committee General Report – Monday, March 22, 2021 Meeting
• Compliance, Audit, and Risk Committee General Report – Monday, March 22, 2021 Meeting
• Finance and Resource Management Committee General Report – Sunday, March 21, 2021 Meeting
• Governance and Administration Committee General Report – Monday, March 21, 2021 Meeting
• Resolution to Approve New Bachelor of Science in Education Degree in Elementary Education
• Resolution to Approve New Undergraduate Education Degree with Two Designations: Bachelor of Arts in Education Degree in Secondary Education and Bachelor of Science in Education Degree in Secondary Education
• Resolution to Establish a Scholarly Articles Open Access Policy
• Resolution to Approve Appointment to the Virginia Coal and Energy Research and Development Advisory Board
• Resolution to Revise Faculty Handbook Promotion and Tenure Guidelines
• Resolution to Revise Chapter Five of the Faculty Handbook: Employment Policies and Procedures for Non-Tenure Track Faculty
• Resolution to Clarify Probationary Reappointment Language in the Faculty Handbook
• Resolution to Amend Voluntary Transitional Retirement Program
• Resolution on Appointment to the New River Valley Emergency Communications Regional Authority
• Report of Research and Development Disclosures (no action required)

Tab D

Report of the Academic, Research, and Student Affairs Committee - Agenda/Briefing Report

Tab E


Tab F

Buildings and Grounds Agenda Items for Board Approval
• **Resolution for Approval of the 2022-2028 Capital Outlay Plan
• **Resolution to Approve the Virginia Tech 2020 Climate Action Commitment

Tab G

Report of the Compliance, Audit, and Risk Committee – Agenda/Briefing Report

Tab H

Report of the Finance and Resource Management Committee – Agenda/Briefing Report

Tab I

Finance and Resource Management Agenda Items for Board Approval
• Resolution for Approval of Financial Plan to Close the Budget Gap Caused by the COVID-19 Pandemic
• Resolution for Approval of Transportation Services Fee Refund for Spring 2021
• Resolution for Approval of Tuition and Fee Rates for 2021-22
- Resolution for Approval of 2021-22 Compensation for Graduate Assistants
- Resolution for Approval of Year-to-Date Financial Performance Report (July 1, 2020 - December 31, 2020)
- **Resolution for Approval of the 2022-2028 Capital Outlay Plan**
- **Resolution to Approve the Virginia Tech 2020 Climate Action Commitment**

**Tab J** Report of the Governance and Administration Committee – Agenda/Briefing Report

**Tab K** Governance and Administration Agenda Items for Board Approval
- Resolution to Approve the Constitution and Bylaws for the Administrative and Professional (A/P) Faculty Senate

**Tab L** Constituent Reports – (No action required) – Time permitting, Constituent Reports will be delivered at the Board’s Information Session on Sunday, March 21, 2021
- Camellia Pastore, Undergraduate Student Representative to the Board
- Sabrina Sturgeon, Graduate Student Representative to the Board
- Tamarah Smith, Staff Representative to the Board
- Eric Kaufman, Faculty Representative to the Board

**Tab M** Open Session President’s Report

**Tab N** Motion to Begin Closed Session

**Tab O** Closed Session Agenda – Monday, March 22, 2021

**Tab P** Closed Session Salary and Personnel Actions for Board Approval
- Resolutions for Approval of Emeritus/a Status (6)
- Resolutions for Approval of Endowed Chairs, Professorships, or Fellowships (11)
- Resolution to Approve Appointments with Tenure (3)
- Resolution for Appointments to University Distinguished Professor (4)
- Resolutions for Approval of Faculty Research Leave Requests (65)
- *Resolution for Ratification of the Personnel Changes Report

**Tab Q** Ratification of the Selection of the 2021-2022 Student Representatives to the Board

**Tab R** Closed Session President’s Report and Items for Board Approval and Information
- Approval of Special Faculty Awards

**Tab S** Closed Session Reports – (No action required)
- Litigation Report
- Fundraising Report

**Tab T** Motion to Return to Open Session

**Tab U** Appointment of the Nominating Committee for Officers of the Board

*These items have been reviewed by the Academic, Research, and Student Affairs Committee and the Finance and Resource Management Committee of the Board of Visitors.

**These items have been reviewed by the Buildings and Grounds Committee and the Finance and Resource Management Committee of the Board of Visitors.

There is no public comment period at this meeting.
CURRENT MEMBERS OF THE BOARD OF VISITORS:

Mr. Edward H. Baine  
Ms. Shelley B. Barlow  
Ms. Carrie H. Chenery  
Ms. Greta J. Harris  
Mr. Charles T. Hill  
Ms. Anna L. James  
Ms. Letitia A. Long, Vice-Rector  
Ms. Sharon Brickhouse Martin  
Dr. Melissa Nelson  
Mr. L. Chris Petersen  
Mr. Mehul P. Sanghani  
Mr. Horacio A. Valeiras, Rector  
Mr. Jeff E. Veatch  
Mr. Preston M. White

Undergraduate Student Representative: Camellia Pastore  
Graduate Student Representative: Sabrina Sturgeon  
Staff Senate Representative: Tamarah Smith  
Faculty Senate Representative: Eric Kaufman

ADMINISTRATIVE STAFF:

Dr. Timothy D. Sands: President  
Dr. Cyril R. Clarke: Executive Vice President and Provost  
Dr. Dwayne L. Pinkney: Senior Vice President and Chief Business Officer  
Dr. Lance Collins: Vice President and Executive Director for the Innovation Campus  
Dr. Karen DePauw: Vice President and Dean for Graduate Education  
Dr. Michael J. Friedlander: Vice President for Health Sciences and Technology  
Mr. Bryan Garey: Vice President for Human Resources  
Dr. Guru Ghosh: Vice President for Outreach and International Affairs  
Dr. Chris Kiwus: Vice President for Campus Planning, Infrastructure, and Facilities  
Dr. Steven H. McKnight: Vice President for Strategic Alliances  
Dr. Scott F. Midkiff: Vice President for Information Technology & Chief Information Officer  
Mr. Ken Miller: Vice President for Finance  
Ms. Kim O’Rourke: Vice President for Policy and Governance & Secretary to the Board  
Mr. Charles D. Phleger: Vice President for Advancement  
Dr. Menah Pratt-Clarke: Vice President for Diversity, Inclusion, and Strategic Affairs  
Dr. Frank Shushok: Vice President for Student Affairs  
Dr. Daniel Sui: Vice President for Research and Innovation  
Dr. Lisa J. Wilkes: Vice President for Strategic Initiatives and Special Assistant to the President  
Vacant: Vice President for Administrative and Business Services

Ms. Kay K. Heidbreder: University Legal Counsel  
Ms. Sharon M. Kurek: Executive Director of Audit, Risk, and Compliance  
Mr. Christopher J. Yianilos: Executive Director of Government Relations


**Academic, Research, and Student Affairs Committee**
Greta Harris, *Committee Chair*
Carrie Chenery
Melissa Nelson
Jeff Veatch

**Buildings and Grounds Committee**
C.T. Hill, *Committee Chair*
Shelley Barlow
Tish Long, *Vice Rector*
Sharon Brickhouse Martin
Mehul Sanghani

**Compliance, Audit, and Risk Committee**
Tish Long, *Vice Rector, Committee Chair*
Chris Petersen (rep G&A)
Anna James (rep FRM)
Sharon Brickhouse Martin (rep B&G)
Jeff Veatch (rep ARSA)

**Finance and Resource Management Committee**
Ed Baine, *Committee Chair*
Anna James
Preston White

**Governance and Administration Committee**
Mehul Sanghani, *Committee Chair*
Tish Long, *Vice Rector*
Chris Petersen

**Executive Committee (6 members)**
Horacio Valeiras, *Rector*
Greta Harris, *Academic, Research, and Student Affairs Committee Chair*
C. T. Hill, *Buildings & Grounds Committee Chair*
Tish Long, *Vice Rector, Compliance, Audit, and Risk Committee Chair*
Ed Baine, *Finance and Resource Management Committee Chair*
Mehul Sanghani, *Governance and Administration Committee Chair*

The Rector is an ex officio member of all standing committees.

The constituent representatives will sit in on the committee meetings of their choice:
Faculty Senate President – Eric Kaufman
Staff Senate President – Tamarah Smith
Graduate Student Representative – Sabrina Sturgeon
Undergraduate Student Representative – Camellia Pastore
Annual Legislative Update
- Dwayne Pinkney, Senior Vice President and Chief Business Officer
- Ken Miller, Vice President of Finance
- Chris Yianilos, Executive Director of Government Relations
- Elizabeth Hooper, Director of State Government Relations

Innovation Campus Update
- Lance Collins, Vice President and Executive Director for the Innovation Campus

Pathways to General Education Presentation
- Rachel Holloway, Vice Provost for Undergraduate Academic Affairs
- Stephen Biscotte, Director of General Education, Undergraduate Studies

Constituent Reports
- Camellia Pastore, Undergraduate Student Representative to the Board
- Sabrina Sturgeon, Graduate Student Representative to the Board
- Tamarah Smith, Staff Representative to the Board
- Eric Kaufman, Faculty Representative to the Board
Mr. Peter Blake, Director of SCHEV, welcomed the attendees and provided a brief overview of the agenda. Attached is a copy of the attendee list.

Mr. Blake introduced the virtual programming and described the process for participating in the sessions, as prescribed in §4-0.01 of the Code of Virginia.

After an introduction from Mr. Blake, Marge Connelly, SCHEV Chair, provided an overview of SCHEV and its coordinating role in the autonomous higher education system. She described the complexity of the business of higher education.

**Perspectives on Board Service from the Executive Branch**

Ms. Connelly introduced the following members of the Executive Branch:
The Honorable Kelly Thomasson, Secretary of the Commonwealth
The Honorable Atif Qarni, Secretary of Education
The Honorable Megan Healy, Chief Workforce Officer
The Honorable Janice Underwood, Chief Diversity Officer
The Honorable Aubrey Layne, Secretary of Finance

Secretary Thomasson explained her role as the Secretary of the Commonwealth and her role in filling gubernatorial appointments. She described their commitment to diversity and expressed how institutions can fill that role.

Ms. Thomasson introduced Fran Bradford, Deputy Secretary of Education, as a stand-in for Secretary Atif Qarni. Deputy Secretary Bradford described the quality of the Virginia system of higher education with its emphasis on equity. She explained how the role of a Board of Visitor can help make progress on the way to becoming the best-educated state and talked about the intersection of business and education systems.

Ms. Bradford introduced Dr. Megan Healy, Chief Workforce Officer. Dr. Healy explained her background in higher education administration and how that is tied into workforce development, especially given unemployment due to the pandemic. People go into higher education to get the skills to get a better job. She encouraged members to think about the outcomes and how to graduate students with the skills needed to get jobs. How do we reach all Virginians and show them the value of education?

Dr. Healy introduced Dr. Janice Underwood, Chief Diversity Officer. Dr. Underwood explained the administration’s role in championing diversity and inclusion. She asked members to ask how they know if they are making a difference for those most marginalized on their campuses. She charged them to champion diversity with a measurable strategic plan to break down long-held barriers. She described the One
Virginia Plan, which increases diversity, as a starting point. She said, “You can’t change what you don’t measure, and you can’t measure what you don’t acknowledge.”

There was some discussion on diversity and equity work during a pandemic.

Dr. Underwood introduced Aubrey Layne, Secretary of Finance. Secretary Layne described the fiduciary responsibilities of the BOV. Financial health is one of the items that a ratings agency examines, including economic climate, fiscal performance, governance and long-term liability burden. Some additional factors might include demographics, cyber security and resiliency. He described the national and state economic indicators and the impact on job growth. Secretary Layne explained current tax policy and its impact on current revenues, as well as the budget risks and considerations with regard to COVID-19.

Council member Katharine Webb offered concluding remarks and praised the Northam administration’s response in real time to mitigate the economic fallout amid a health crisis.

How Service on the Governing Board of a Public Institution of Higher Ed is Unique from All Other Board Service

Mr. Tom Slater, member of Council, introduced Henry Stoever, president and CEO, Association of Governing Boards (AGB).

Mr. Stoever provided an overview of AGB and presented slides regarding board service. He said that board members serve as indispensable partners. Currently, finances are tough for institutions. The linkage between the institution and its foundation is important.

Demand for higher education has eroded. Between WWII and 2000, the population grew significantly, but now the average number of children in a household is 1.5, down from 2.0. This decrease in demand makes the role of recruitment/retention very important. States are challenged to allocate state tax revenue, which affects the sustainability of the business model. Institutions have to establish their value proposition and relevance to ensure that students get the skills and capacity to thrive in the workforce.

A great board needs the right composition/right people, doing the right things. A strategic board is focused on the long term and on policies that will permeate across the campus versus operations and tactics.

Mr. Stoever highlighted six principles that are important to board work. He recommended that members invest several hours each week to learn about institutions and higher education in general. His concluding advice was to engage in continuous learning, get to know the institution’s board professional and understand how they operate/communicate, communicate with the board chair and president, and know when board and committee meetings are scheduled.
Mr. Stoever answered questions about shared governance and the difference between board service for public institutions and other types of entities.

**Legal and Ethical Considerations for Board Service in Virginia**

Ken Ampy, member of Council, commented on the role of board members and introduced Deb Love, chief of the education section for the Office of the Attorney General and Alan Gernhardt, director of the FOIA Council.

Ms. Love briefed the group on the role of the Office of the Attorney General (OAG) as the exclusive counsel for institutions of higher education. Attorneys are on the payroll of the institution but derive authority from the OAG. She encouraged members to work proactively with counsel on issues they anticipate will come up at a meeting. Regarding conflicts of interest, advice from OAG is just advice, but members can seek a formal opinion. As a public board, public has access to records and meetings.

Mr. Gernhardt talked about the Freedom of Information Act (FOIA), remarking that it is one of the few laws that have a policy statement. It ensures that people are informed about government decisions. Various forms of communication may be considered public records, including social media posts, emails and text messages. Quickly advise the institution's FOIA officer about any request for records. Public meetings must be properly noticed and open to the public, and minutes must be taken. For closed meetings, the body must first have an open meeting, hold a vote to close the meeting, and then follow specific requirements.

The panel answered questions from the group, which mainly concerned FOIA requirements.

**The ABC’s of Higher Ed Finance: State Budgeting (and Cutting); Institutional Budget Planning; Board Tuition and Fee Setting; Student Debt Trends**

Victoria Harker, Council member and former chair of the Finance Committee, Board of Visitors for the University of Virginia, introduced the panel. Michael Maul, deputy director of the Department of Planning and Budget, Amy Sebring, chief operating officer, College of William & Mary.

Ms. Harker talked about the environment of higher education finance and the board members’ responsibilities from a governance perspective, especially at this time, when funding will continue to be challenged. Soon, metrics will be released from the Auditor of Public Accounts with information on solvency and credit metrics of institutions. This information will be important for members to know what the snapshot in time looks like for their institution. Ms. Harker introduced Mr. Maul and Ms. Sebring.
Mr. Maul presented on the state budgeting process. He broke down how general funds are allocated among state functions, pointing out that higher education funding is discretionary, unlike other categories. He provided an overview of categories of higher education spending. Higher education is a shared cost between the institutions and the state. Mr. Maul explained that many factors and perspectives impact budget development, such as the priorities of the Governor and General Assembly, public sentiment, changes in federal funding levels, changes in laws and regulations, etc. He highlighted impacts on institutional budgets due to the pandemic, such as the need for personal protection equipment, social distancing infrastructure, testing costs and auxiliary revenue losses. Federal aid did offset some revenue loss and costs.

Ms. Sebring presented regarding institutional finance issues and highlighted key areas of oversight/approval for the board.

Key questions:
1. Revenues. Board members should understand the major sources and key drivers, including state, students, research and philanthropy.
2. Expenses. This includes the major areas of expenditure for the institution by program area, personnel costs and structure of the workforce.
3. Cost structure, e.g., are costs variable vs. fixed? This will inform how quickly the institution can pivot when needed.
4. Financial strength. Review financial statements, assess auxiliary and other reserves, be aware of financial ratios and how to use them, and watch data trends.

The panel answered questions from the audience.

Overcoming Systemic Racism in Higher Education: Toward Diversity, Equity and Inclusion

Alex Arriaga, Council member, commented on the role of boards in ensuring DEI and the relationship to state attainment goals. She introduced Toya Barnes-Teamer, principa at HCM Strategists.

Dr. Barnes-Teamer talked about steps to address systemic racism:
1. Acknowledgment of historical context of systemic racism.
2. Awareness of the needs of diverse groups. Members should know how the institution defines diversity and data about the student population. “Checking the box” by hiring a diversity officer, recruiting more students of color or tinkering with the curriculum will not resolve the challenges of systemic racism without considering the policies and culture of the organization. Do work around implicit bias.
3. Alliance (Inclusion). As long as students of color are not included in success, other efforts toward inclusion are ineffective. Must address barriers in culture and climate.

4. Advocacy (Equity). Consider strategic plan and One Virginia Plan and institution’s own DEI plan. To be a true advocate, must have courageous leadership and be able to confront reality, seek feedback and listen.

5. Accountability (Systemic change). Look at policies and procedures through an equity lens.

Dr. Barnes-Teamer answered questions from the audience.

WEDNESDAY, OCTOBER 21

Mr. Blake hosted a voluntary virtual coffee talk with board members and participants who discussed topics of interest from the previous day.

The full session began at 8:30 a.m. Mr. Blake welcomed the group, introduced the virtual programming and described the process for participating in the sessions, as prescribed in §4-0.01 of the Code of Virginia. He introduced Ms. Connelly, chair of SCHEV Council.

Ms. Connelly made remarks about the program and encouraged members to reach out to panelists if they have questions about their service. Members discussed important topics from the previous day.

Perspectives on Board Service from the Governor

Ms. Connelly introduced Governor Ralph Northam. Governor Northam thanked SCHEV. He thanked the board members for serving and said that board service is a rewarding role and very important during the pandemic. Virginia is blessed to have the best colleges and universities. Over a million Virginians have applied for unemployment benefits, and we need to help them get back to work. Business wants to be in Virginia for our talented workforce, and we should ensure that training and re-training is available. Equity is also important. All should have access and feel safe and welcome on our campuses. Affordability is important for all. The G3 program remains a priority, and we are looking for ways to fund the program and early childhood education. We have also found ways to refinance college debt. Regarding COVID-19, we are doing what we can. Until there is a safe and effective vaccine, we are dealing with 800-1,000 new cases per day, so it is important to adhere to best practices for stopping the spread.

A Perfect Storm of Challenges for Virginia Boards: Demographic Change, Economic Uncertainty, and Social Unrest Before, During and After a Pandemic

Ms. Connelly presented slides with an overview of demographic changes, state financing, costs to students and racial disparities. She introduced Anne Holton,
former Secretary of Education and former interim president of George Mason University and Stephen Moret, president and CEO of the Virginia Economic Development Partnership.

Ms. Connelly asked the panelists about the most concerning impacts for the Commonwealth, particularly for the economy. Dr. Moret said that impacts to the hospitality and retail sectors particularly affected low-income people. The pandemic has exacerbated already existing disparities for people of color, the less educated, and highlighted differences in urban versus rural areas. There will be over 200K Virginians out of work by the end of the year. In the post-recovery Virginia, the employment mix will be different. Many people will not be able to return to their previous job/occupation and will need to be reskilled. This is where higher education comes in.

Ms. Holton talked about the long-term impact of the pandemic; it will be with us for awhile and it will be hard for higher education. Universities are the economic heartbeat of the economy for many regions and the producer of the workforce for the next generation.

Regarding the decentralized structure of Virginia higher education, Ms. Holton said that our system is diverse and serves diverse needs. The response to COVID is entirely different for different institutions, depending on the student population. Yet each desperately needed tight coordination with the Commonwealth this spring. The presidents meet on a regular basis and this was very helpful. It might be helpful to have a SCHEV-coordinated plan for emergencies. Dr. Moret said that the highly decentralized system in the United States is unique in the world. In Virginia, the decentralization has contributed to the quality of the institutions. The funding model discourages institutions from pursuing programming that meets the state’s needs. However, many of the programs in greatest demand are the highest cost for the institutions. They should be able to make decisions in a cost-neutral environment.

There was a discussion about the effects of the recession on institutions and the need for consistent funding.

Ms. Connelly asked about the actions that the four-year institutions can take. Dr. Moret talked about the need for career development and placement. Research shows that college is important for career success and that the first job after college sets someone on a career trajectory. Relevant work experience during college is very important to help their transition to the workforce. Ms. Holton said that many students do what their parents do, but there are many new jobs out there. There should be a focus on internships and career connections.

When asked for advice for the board members, Ms. Holton said the most important role is to hire the president, but most will not experience that during their term. The next most important role is to ask questions, do homework and show
Dr. Moret added that members should stay focused on policy and not micro-managing.

The panel answered questions from the audience. Rosa Atkins, Council member, provided concluding remarks on the session.

**Timely Topics in Student Life, Wellness and Campus Safety**

Deputy Secretary Fran Bradford served as moderator and introduced Dr. R. Kelly Crace, associate vice president of health and wellness at the College of William & Mary and Kevin Foust, vice president of campus safety and security at Virginia Tech.

Dr. Crace began the discussion by talking about yesterday’s normal. Students were overextended and stressed. With the landscape in higher education right now, students are exhausted and strained. Stress is a function of caring. Whenever things matter to us, we cannot escape (1) uncertainty, (2) potential cost and (3) perceived evaluation. Stress leads to the emotions of fear of failure. The fear-based model of excellence eventually has a ceiling effect and increasing cost. Moving from stress reduction to stress management is a way of addressing this problem.

Dr. Crace and Mr. Foust addressed specific topics of mental health and free speech and protests. In mental health, Dr. Crace said that the characterization of the current generation of young adults as “snowflakes” is a misconception because they are a young group of resilient adults. Institutions can help by collaborating with parents and talking about how to manage the stress together. Demand for mental health always exceeds resources, but institutions can develop multiple portals of entry to manage non-clinical distress such as mindfulness, yoga, spending time with others, etc.

Mr. Foust mentioned that some students arrive on campus with pre-diagnosed mental health conditions and are often on medication for their condition. In his experience, students start to feel better after spending some time on campus and decide they no longer need their medications. For some of those students, forgoing medication turns into a crisis. Increased incidents of mental health on campus occur more frequently around finals and graduation. Alcohol and drug abuse also play a major role.

Mr. Foust then talked about social justice and free speech issues and the need for members to learn the processes they have in place at their institutions to protect their students’ rights.

Ms. Reena Medavarapu, member of the SCHEV Student Advisory Committee, spoke of the effects COVID-19 has had on the student population and how student activities have been moved online. Students are doing their best to maintain some level of normalcy by interacting via video chats and social media.
The panelists offered final pieces of advice to conclude the session. Ms. Medavarapu urged board members to form connections while serving. Dr. Crace told board members to mentor their administrations to lead with the values of their institutions. Mr. Foust said that the right decision may not always be the popular decision, and the popular decision may not always be the right decision.

The panelists answered questions from attendees.

**Reflections on the Lessons of 2020: Conversation with Board Rectors and Institutional Presidents**

Mr. Blake introduced Alvin Schexnider, senior fellow with the Association of Governing Boards and former Chancellor of Winston-Salem State University, moderated the session. He also introduced the panelists, Jimmy Hazel, Rector for the George Mason University Board of Visitors, Huron Winstead, Rector of the Board for Virginia State University and Glenn DuBois, Chancellor of the Virginia Community College System.

Mr. Schexnider reviewed themes that surfaced in the previous sessions, including the role of higher education in getting people back to work, the importance of diversity, equity and inclusion, and how to prepare board members for the important work they have taken on. He began with a question to Rector Hazel regarding how the board handled the onboarding process with a new president during this time. Mr. Hazel described the timeline of recruiting president Gregory Washington. The virus hit just after President Washington’s appointment was announced. Attention had to turn to dealing with health issues, social justice issues and the economic impact of the crisis. Interim president Holton did not shy away from helping to prepare the institution pending his arrival. They have daily conversations that are different conversations from those they thought they would be having during the recruitment process.

Mr. Winstead spoke to the relationship between the president and the rector. Strategic partnerships with board leadership. The board should hire, motivate and inspire the president. The president and rector should have a close, advisory relationship.

Chancellor DuBois spoke to diversity, equity and inclusion on the VCCS board. There are four diverse new board members, making the board majority minority. DEI is part of the reason the community colleges were established; they exist to give everyone opportunities. There is more work to do to close achievement gaps.

Mr. Schexnider asked the panelists what advice they have for members when there is a surprise. Mr. Hazel said they have a no surprise rule. When it comes time to take a vote, there should be no surprises about where everyone stands. To do that, stay in constant conversation. Emails are not the best; pick up the
phone and talk. Transparency on the important issues affecting the campus is very important.

The panelists addressed board effectiveness and engagement. Mr. Winstead said that at VSU, they use “forward authority,” so that the president can make approvals in absence of a full board. The president also has such authority during an emergency situation, and COVID has been such a situation. Chancellor DuBois said that preparation is important. The rector must run the meeting, so they spend a lot of time before a meeting to ensure that he is comfortable with the agenda. The many routine administrative responsibilities that must be acted upon are placed into a consent agenda so they can dispatch with them quickly.

The panelists agreed that boards should have a protocol around public relations and communications during a crisis. They described the processes at their respective institutions. Generally, the rector and president speak for the institution.

Dr. Schexnider asked about the role of the board in supporting fundraising and cultivating relationships with stakeholders. Mr. Hazel said that it was part of the discussion when recruiting the new president. There is a report on fundraising at every board meeting. Mr. Winstead said that the social media footprint has also changed the fundraising role. Chancellor DuBois said that every foundation has an annual campaign, and every board member should contribute.

The panelists and Dr. Schexnider offered concluding thoughts and responded to questions.

Council member, Katie Webb concluded the panel and introduced Kelly Thomasson, who provided final remarks about the program and said that official paperwork would be sent to the board professionals for distribution.

________________________
Katherine Webb
Council Secretary

________________________
Beverly Rebar
SCHEV staff
The Board of Visitors of Virginia Polytechnic Institute and State University met on Monday, November 16, 2020, at 1:15 p.m. in Latham Ballroom at The Inn at Virginia Tech, Blacksburg, Virginia.

Present:
Edward H. Baine
Shelley Butler Barlow
Carrie H. Chenery
Greta J. Harris
C. T. Hill
Anna L. James
Sharon Brickhouse Martin
Melissa Byrne Nelson
L. Chris Petersen
Mehul P. Sanghani
Horacio A. Valeiras (Rector)
Jeff Veatch (participated electronically)*
Preston M. White (participated electronically)*

Absent:
Letitia A. Long (Vice Rector)

*In accordance with the Board of Visitors Bylaws and §2.2-3708.2 (A)(1)(a) of the Code of Virginia, as amended, Mr. Veatch and Mr. White participated electronically because each had a temporary medical condition that prevented his physical attendance.

Mr. Veatch participated from 201 N. Union Street, Alexandria, VA 22314; and Mr. White participated from 1364 Air Rail Avenue, Virginia Beach, VA 23455.

Constituent Representatives:
Eric Kaufman, Faculty Representative
Tamarah Smith, Staff Representative
Sabrina Sturgeon, Graduate Student Representative
Camellia Pastore, Undergraduate Student Representative

Also present were the following: President Timothy Sands, Kim O'Rourke (Secretary to the Board), Eric Brooks, Lori Buchanan, Cyril Clarke, Kari Evans, Kay Heidbreder, Dwayne Pinkney, and a Roanoke Times reporter.

Due to Executive Order 67 (which addresses the COVID-19 pandemic) amended by Governor Northam effective November 16, 2020, and limiting the size of “gatherings” to 25, an overflow room was arranged, and the following people observed the meeting.
from the overflow room: Mac Babb, Whit Babcock, Lance Collins, Al Cooper, Corey Earles, Kevin Foust, Bryan Garey, Dee Harris, Chris Kiwus, Nancy Meacham, Ken Miller, April Myers, Justin Noble, Mark Owczarski, Charles Phlegar, Ellen Plummer, Frank Shushok, Daniel Sui, Jon Clark Teglas, Tracy Vosburgh, Chris Yianilos, and a member of the media. As necessary, speakers were rotated in and out of the main meeting room so that no more than 25 people were in the room at any one time.

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There was no public comment period.

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Rector Valeiras convened the meeting and welcomed everyone. He introduced the new Vice President for Research and Innovation, Dr. Daniel Sui.

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APPROVAL/ACCEPTANCE OF THE CONSENT AGENDA OPEN ITEMS*
(Refer to Attachments A through K)

[*Note: Items on the consent agenda are matters of importance that have been reviewed carefully by members of the board in preparation for the meeting but have been determined not to require discussion by the board or its committees.]

Rector Valeiras asked for a motion to approve/accept the consent agenda open session items as listed. The motion was made by Mr. Baine, seconded by Ms. Harris, and approved unanimously.

- Minutes of the Board of Visitors Meeting held August 25, 2020
- Report of Board of Visitors Information Session (11/15/20) - Attachment A
- Report of the Academic, Research, and Student Affairs Committee (11/16/20) - Attachment B
- Report of the Buildings and Grounds Committee (11/15/20) - Attachment C
- Report of the Compliance, Audit, and Risk Committee (11/15/20) - Attachment D
- Report of the Finance and Resource Management Committee (11/16/20) - Attachment E
- Report of the Governance and Administration Committee (11/16/20) - Attachment F
From the Academic, Research, and Student Affairs Committee Consent Agenda:

- Resolution to Revise Graduate Honor System Constitution - Attachment G
- Resolution for Approval of the Pratt Fund Program and Expenditures Report - Attachment H (This was also on the Finance and Resource Management Committee consent agenda.)
- Resolution for Approval of Reappointments to the Virginia Coal and Energy Research and Development Advisory Board - Attachment I
- Resolution for Exclusion of Certain Officers/Directors - Attachment J

Consent agenda information item; no Board of Visitors action required:

- Report of Research and Development Disclosures - Attachment K

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REPORT OF THE ACADEMIC, RESEARCH, AND STUDENT AFFAIRS COMMITTEE

Rector Valeiras called on Ms. Harris for the report of the Academic, Research, and Student Affairs Committee.

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REPORT OF THE BUILDINGS AND GROUNDS COMMITTEE

Rector Valeiras called on Mr. Hill for the report of the Buildings and Grounds Committee.

As part of the Buildings and Grounds Committee report, approval of the following resolution was moved by Mr. Hill, seconded by Mr. Sanghani, and approved unanimously.

Resolution to Approve the Virginia Tech Crisis and Emergency Management Plan and Addendum

That the resolution adopting the Virginia Tech Crisis and Emergency Management Plan and Addendum, to include all-hazards plans and procedures for disasters, be approved. (Copy filed with the permanent minutes and marked Attachment L.)

*******
REPORT OF THE COMPLIANCE, AUDIT, AND RISK COMMITTEE

Rector Valeiras called on Ms. James for the report of the Compliance, Audit, and Risk Committee. Ms. James had chaired the committee meeting in the absence of Ms. Long.

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REPORT OF THE FINANCE AND RESOURCE MANAGEMENT COMMITTEE

Rector Valeiras called on Mr. Baine for the report of the Finance and Resource Management Committee.

As part of the Finance and Resource Management Committee report by Mr. Baine and with the endorsement of the Buildings and Grounds Committee, approval of the following resolution was moved by Mr. Baine, seconded by Mr. Hill, and approved unanimously.

Resolution to Approve a Capital Lease for the 3200 Commerce Street Property

That the resolution authorizing Virginia Tech to enter into a capital lease with the Virginia Tech Foundation for the 3200 Commerce Street property be approved. (Copy filed with the permanent minutes and marked Attachment M.)

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As part of the Finance and Resource Management Committee report by Mr. Baine and with the endorsement of the Buildings and Grounds Committee, approval of the following resolution was moved by Mr. Baine, seconded by Mr. Hill, and approved unanimously.

Resolution to Approve Supplement for the New Upper Quad Residence Hall

That the resolution authorizing Virginia Tech to move forward with a $7 million supplement to adjust the total project authorization for the New Upper Quad Residence Hall project to $40 million and to complete the project be approved. (Copy filed with the permanent minutes and marked Attachment N.)

* * * * *
As part of the Finance and Resource Management Committee report by Mr. Baine and with the endorsement of the Academic, Research, and Student Affairs Committee, approval of the following resolution was moved by Mr. Baine, seconded by Ms. Harris, and approved unanimously.

**Resolution Delegating Authority for the Personnel Changes Report**

That the Board of Visitors approve the Resolution to Amend Delegation of Authority for Selected Faculty Personnel Actions. (Copy filed with the permanent minutes and marked Attachment O.)

As part of the Finance and Resource Management Committee report, approval of the following resolution was moved by Mr. Baine, seconded by Ms. James, and approved unanimously.

**Financial Update on COVID-19 and Approval of the 2020-21 Operating Budget Adjustment**

That the resolution authorizing Virginia Tech to adjust the operating budget to reflect the financial impact of COVID-19 be approved. (Copy filed with the permanent minutes and marked Attachment P).

As part of the Finance and Resource Management Committee report, approval of the following resolution was moved by Mr. Baine, seconded by Ms. James, and approved unanimously.

**Approval of 9(d) Debt Restructuring and Refunding Resolutions**

That the Board of Visitors of Virginia Polytechnic Institute and State University approve the resolution authorizing participation in the Virginia College Building Authority’s Debt Restructuring Program; identifying the authorized officers; and authorizing the authorized officers to negotiate, execute, and deliver all necessary documents. (Copy filed with the permanent minutes and marked Attachment Q.)
As part of the Finance and Resource Management Committee report, approval of the following resolution was moved by Mr. Baine, seconded by Ms. James, and approved unanimously.

**Approval of Year-to-Date Financial Performance Report**  
(July 1, 2020 - September 30, 2020)

That the report of income and expenditures for the University Division and the Cooperative Extension/Agricultural Experiment Station Division for the period of July 1, 2020, through September 30, 2020, and the Capital Outlay report be approved. (Copy filed with the permanent minutes and marked Attachment R.)

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**REPORT OF THE GOVERNANCE AND ADMINISTRATION COMMITTEE**

Rector Valeiras called on Mr. Sanghani for the report of the Governance and Administration Committee.

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**PRESIDENT’S REPORT**

A copy of President Sands' remarks to the Board of Visitors is filed with the permanent minutes and marked Attachment S.

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**CONSTITUENT REPORTS (no action required)**

- Undergraduate Student Representative to the Board - Camellia Pastore
- Graduate Student Representative to the Board - Sabrina Sturgeon
- Staff Representative to the Board - Tamarah Smith
- Faculty Representative to the Board - Eric Kaufman

The reports by the student representatives were delivered orally at the Information Session on November 15, 2020, and the reports by the faculty and staff representatives were delivered orally at the full Board meeting on November 16, 2020. (Copies filed with the permanent minutes and marked Attachment T.)
**Motion to Begin Closed Session**

Mr. Hill moved that the Board convene in a closed meeting, pursuant to § 2.2-3711, Code of Virginia, as amended, for the purposes of discussing:

1. Appointment of faculty to emeritus status; the consideration of individual salaries of faculty; consideration of endowed professors; review of departments where specific individuals’ performance will be discussed; and consideration of personnel changes including appointments, resignations, tenure, and salary adjustments of specific employees and faculty leave approvals

2. The status of current litigation and briefing on actual or probable litigation

3. Fundraising activities

4. Special awards

all pursuant to the following subparts of 2.2-3711 (A), Code of Virginia, as amended, .1, .7, .9, and .11.

The motion was seconded by Ms. James and passed unanimously.

* * * * *

**CLOSED SESSION REPORTS**

(No Board action required)

1. Litigation report – Ms. Kay Heidbreder
2. Fundraising report – Mr. Charlie Phlegar

* * * * *

**Motion to Return to Open Session**

Following the closed session, members of the media, students, and the public were invited to return to the meeting. Rector Valeiras asked Mr. Hill to make the motion to return to open session. Mr. Hill made the following motion:
WHEREAS, the Board of Visitors of Virginia Polytechnic Institute and State University has convened a closed meeting on this date pursuant to an affirmative recorded vote and in accordance with the provision of The Virginia Freedom of Information Act; and

WHEREAS, Section 2.2-3712 of the Code of Virginia requires a certification by the Board of Visitors that such closed meeting was conducted in conformity with Virginia law;

NOW, THEREFORE, BE IT RESOLVED that the Board of Visitors of Virginia Polytechnic Institute and State University hereby certifies that to the best of each member's knowledge: (i) only public business matters lawfully exempted from open meeting requirements by Virginia law were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion convening the closed meeting were heard, discussed, or considered by the Board of Visitors.

The motion was seconded by Mr. Petersen and passed unanimously.

* * * * * * * * * *

Upon motion by Mr. Hill and second by Mr. Baine, approval was given to the following group of resolutions as considered in closed session.

- **Resolutions to Approve Emeritus/a Status (10)** - Attachment U
- **Resolutions to Approve New Appointments of Endowed Chairs, Professorships, or Fellowships (7)** - Attachment V
- **Resolution for Appointment with Tenure (1)** - Attachment W
- **Ratification of the Personnel Changes Report, as amended.** This item was reviewed by the Finance and Resource Management and the Academic, Research, and Student Affairs Committees - Attachment X
- **Resolutions to Name University Facilities** – Attachment Y

(Copies are filed with the permanent minutes and marked as noted above.)

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Upon motion by Ms. James and second by Mr. Sanghani, the meeting was adjourned at 4:11 p.m.

* * * * *

The date of the next regular meeting is March 20-21, 2021, in Blacksburg, Virginia.

Horacio A. Valeiras, Rector

Kim O'Rourke, Secretary
Minutes of the Public Comment Period on Tuition and Fees
March 8, 2021
Report of Information Session
Sunday, March 21, 2021

Filler Page
Academic, Research, and Student Affairs
General Report
of March 22, 2021
will be presented at
Monday’s meeting of the Board
Buildings and Grounds Committee

General Report

of March 22, 2021

will be presented at

Monday’s meeting of the Board
Compliance, Audit, and Risk Committee

General Report

of March 22, 2021

will be presented at

Monday’s meeting of the Board
Finance and Resource Management Committee
General Report of March 21, 2021 will be presented at Monday’s meeting of the Board
Governance and Administration Committee
General Report
of March 22, 2021
will be presented at
Monday’s meeting of the Board
RESOLUTION TO APPROVE NEW BACHELOR OF SCIENCE IN EDUCATION
(B.S.Ed.) IN ELEMENTARY EDUCATION (PK-6)

WHEREAS, Virginia’s Pre-school through 12th grade (PK-12) schools began the 2016-2017 school year with more than 1000 teacher vacancies; and

WHEREAS, there is a documented shortage of qualified PK-12 teachers nationally and within the Commonwealth of Virginia; and

WHEREAS, Governor McAuliffe signed an executive order in December 2017 directing the state’s education board to adopt emergency rules to again allow colleges to offer four-year undergraduate degrees in teaching; and

WHEREAS, according to the 2020-2021 Ten Critical Shortage Teaching Endorsement Areas in Virginia provided by the Commonwealth, elementary education is the second most in-need licensure area, only behind special education; and

WHEREAS, Virginia Tech’s School of Education (SOE) in the College of Liberal Arts and Human Sciences (CLAHS) is committed to providing coursework and experiential learning fitting the VT-shaped curriculum to produce licensable graduates with the knowledge, skills, and dispositions of highly qualified PK-12 educators thereby addressing the noted state teacher vacancies; and

WHEREAS, no new resources will be required to initiate this new Bachelor of Science in Education (B.S.Ed.) in elementary education (PK-6) due to redeveloping existing courses and utilizing current undergraduate initiatives to the maximum extent possible; and

WHEREAS, letters of support have been received from all departments whose courses SOE students would take; and

WHEREAS, the Bachelor of Science in Education in elementary education (PK-6) would be an identifiable curriculum with a major in elementary education and a requirement that students pass required state licensure exams that clearly signal the expertise and career focus of educator preparation; and

WHEREAS, the Bachelor of Science in Education in elementary education (PK-6) is anticipated to initially attract 25-30 additional students per year interested in pursuing careers in PK-6 teaching to Virginia Tech;

NOW, THEREFORE, BE IT RESOLVED that the new Bachelor of Science in Education degree in elementary education (PK-6) be approved effective fall 2021 and the proposal forwarded to the State Council of Higher Education for Virginia (SCHEV) for approval and to the Southern Association of Colleges and Schools (SACS) for notification.

RECOMMENDATION:

That the Board of Visitors approve this resolution to establish a new Bachelor of Science in Education degree in elementary education (PK-6).

March 22, 2021
Proposal for New Degrees in Education

Justification:

Teacher Shortage

There is a current documented shortage of qualified PK-12 teachers both nationally and within the Commonwealth of Virginia. According to data from the Virginia Department of Education, the number of unfilled teaching positions in the state nearly doubled between the 2013-2014 and 2017-2018 school years causing Virginia schools to begin the 2016-2017 school year with more than 1000 teacher vacancies. In response, former Gov. Terry McAuliffe signed an executive order in December of 2017 directing the state education board to adopt emergency rules to allow colleges to again offer four-year undergraduate degrees in teaching. In 2018 the General Assembly introduced and passed, among additional changes to the teaching licensure process, legislation permitting colleges and universities to create these programs. Students can now become fully-licensed teachers after earning a four-year undergraduate degree in education.

By October of 2019, the State Council of Higher Education for Virginia approved new programs at fifteen public colleges and universities in the state. Our community partners, including Montgomery County Public Schools, have also indicated a local need for more properly licensed and qualified teachers, while undergraduate admissions recruiters have reported that high-school students are often confused about how to become a PK-12 teacher at Virginia Tech. As other colleges and universities in Virginia begin offering undergraduate licensure, Virginia Tech School of Education will need to offer comparable opportunities in order maintain current enrollment and attract new students.

Critical Shortage Areas

While there are teacher vacancies of all types across the state, there are specific licensure areas that have especially prevalent shortages. The Virginia Department of Education discloses annually, a list of ten Critical Teaching Shortage Areas to the General Assembly based on vacancies and/or a documented lack of qualified applicants for positions. Elementary Education has been near the top of this list since the 2010-2011 school year. Secondary Math and Career and Technical Education have also been in the top half for the same period. Secondary English Language Arts has been included each year and History & Social Sciences has ranked recently, as well.

Because preparation is a key factor influencing teacher recruitment and retention, Virginia Tech School of Education has an opportunity to produce capable educators and
reduce some of these shortages. Offering licensure through undergraduate majors will streamline requirements and lower the overall cost of entering the profession, while still preparing highly qualified teachers for the Commonwealth of Virginia.

Job Market Information

According to the Virginia Employment Commission, both Elementary and Secondary School Teacher are considered high-growth occupations for individuals holding bachelor’s degrees. The number of Elementary School Teacher positions are expected to increase by almost 4000 while Secondary positions close to 3000. The Bureau of Labor Statistics projects a national growth of 3% for Kindergarten and Elementary School Teachers and 4% for High School Teachers over the next 10 years.

Strategic Plan:

Since fall 2018, faculty and staff in the School of Education have met with (and continue to meet with) representatives from the Virginia Department of Education and State Council of Higher Education for Virginia to determine how new regulations will affect our programs. We have also consulted with teacher preparation programs at other colleges and universities regarding their plans for transitioning to undergraduate programs. The School of Education faculty and staff met as a group in spring 2019 to plan how our new programs would operate and collaborated with impacted departments to determine how we could build programs that would provide appropriate knowledge, skills, and dispositions for future educators while preserving the key student-centered elements of an undergraduate program. Our Science and Music Education programs will remain at the graduate level while Elementary, English Language Arts, History and Social Sciences, Mathematics, and Career and Technical Education programs will transition to undergraduate licensure.

We continue to work with appropriate departments on campus as well as our SCHEV representative and the VDOE to create high-quality undergraduate teacher preparation programs. We have met with the First Year Experience office to plan for students who will have different developmental needs than those we currently serve in our graduate programs and will continue to build relationships with high-school and community college teacher education programs that support students before they enter formal approved licensure programs.

The proposed degrees and majors will be housed in the School of Education within the College of Liberal Arts and Human Sciences. We are proposing two degrees, B.S.Ed. in Elementary Education and B.A.Ed./B.S.Ed. in Secondary Education, based on available CIP codes, the differences in core competencies for licensure established by the Virginia Department of Education, and professional educator standards recognized by the Virginia Tech School of Education.

B.S.Ed. in Elementary Education will contain the Elementary Education PK-6 major with licensure. The content covered in this major is intentionally planned to cover specific
material and practical aspects of teaching young children without much room for deviation. The Elementary Education major includes an emphasis on STEM as well as literacy.

The B.A.Ed./B.S.Ed. in Secondary Education will contain majors where licensure involves students in 6th-12th grade. While the foundational education courses are the same for all majors in Secondary Education, the specific coursework of each licensure area is unique requiring multiple majors. Both B.A.Ed. and B.S.Ed. are included as options within Secondary Education because the individual teaching areas have different professional expectations which are reflected in the required courses.

The graduation checksheets for English Language Arts and History and Social Sciences include a broader array of courses within the subject area allowing students to customize their education based on individual interests. Administrators hiring teachers in these licensure areas expect students to earn a B.A.Ed. and possess individualized specialties. Mathematics and Career and Technical Education requirements, on the other hand, are very scripted to cover the specific fundamental standards of the content area. Administrators hiring in these areas would expect all licensed teachers to be proficient in the same content and possess a B.S.Ed. in Secondary Education.

The first students will be able to enroll fall of 2021 and those who are able to transfer into the major could possibly graduate in spring 2023, provided they have taken the appropriate courses. During the transition, any student who would not be able to transfer into and complete the undergraduate degree in 4 years would be allowed to continue through the 5th-year master’s program as it is currently established. A transition is expected by spring 2024. Subsequently, a revised master’s program will be developed for licensed, practicing teachers to further their professional competences.

Students Served:

Our new education majors will serve the same audience as the graduate licensure programs with the primary purpose being to reduce the financial barrier of a 5th year of college while still producing teachers who are strong in pedagogy and content knowledge.

Between 2014 and 2019, an average of 231 incoming freshmen indicated an interest in teaching on their Virginia Tech admission applications. In 2019, of those freshmen, 35 declared Pre-Education and Human Sciences, Undecided as their first-choice major. While PreEd Undecided is not a degree-granting major, most of these students will progress to our licensure programs by way of related undergraduate degrees.

The Pre-Education Advising Program (PEAP) currently serves between 300 and 400 students, in multiple majors. PEAP is a part of the School of Education and supports undergraduate students from all majors in moving toward the goal of becoming
competitive applicants and highly qualified educators. Participating students benefit from: advising sessions on specific requirements for state endorsements and graduate school admissions, field experiences in local schools, teacher assessment preparation, professional development workshops, and leadership opportunities in pre-professional student organizations. Not all students who participate will apply to our graduate program.

There are several reasons that pre-education students choose to not continue with graduate school, including: cost, desire to move closer to home, difficulty with prerequisites, the classroom was not what they expected, and alternate licensure opportunities. Each year, graduate licensure programs in the VT School of Education produce 100-150 licensed PK-12 educators. Over the past 5 years, Elementary Education has averaged 25 students per year, while Math, English, Social Studies and CTE (combined into the category of Secondary Education) have averaged around 30.

In the short-term, we anticipate the number of incoming freshmen to mirror what currently applies to the graduate program 25-35 students per degree (not per major). We expect that number to double within the first two years and cap at 75-100 incoming freshmen. Of those, we anticipate 85-90% will complete the degree. We expect to maintain 250-350 undergraduate students in each degree program (elementary and secondary).

For students who do not complete the teacher licensure requirements but still earn the education degree, there are related career opportunities in the field, such as: teaching in private schools or online programs, hospitals providing educational services for long-term school-aged patients, professional tutoring, designing curriculum for textbook companies, developing exams for testing agencies, or working in educational outreach programs for museums/parks or agencies providing professional development to PK-12 teachers. Students who qualify may also apply to one of our graduate programs.

Benefits to Students

Undergraduate education degrees allow a route to licensure without the added expense and time of graduate school. Having clearly visible education majors will allow high-school students, who are specifically interested in teaching, to imagine themselves at Virginia Tech. High-school and community college students who are participating in future educator programs will be able to readily transition into our undergraduate majors instead of going through other programs to be eligible for graduate study. Undergraduate programs also allow more graduates to obtain a full teaching license upon completion of their bachelor’s program.

Undergraduate programs create more opportunities for students to learn their content within the context of teaching it, creating stronger connections between pedagogy and content knowledge. The increased length of time prospective teacher candidates will spend in the program will allow us to properly scaffold their learning and provide valuable feedback throughout the degree. It will also provide students opportunities to
meaningfully reflect on their coursework and teaching experiences as they develop essential educator dispositions.

Finally, offering formal education majors will encourage a sense of belongingness and professional identity among future educators. Sense of belonging and its impact on student success has been well documented in higher education research. A college students’ sense of belonging is related to several things, including engagement and retention, motivation, and academic performance. Equally important to education students, is the development of a professional teacher identity. This identity promotes effectiveness and well-being and is developed, in-part, through interactions with peers during shared pre-professional experiences.

Benefits to Community

Maintaining the quality of our program while reducing financial barriers and expediting the licensure process advances the teaching profession, as well. Under certain circumstances, an individual with a bachelor’s degree can obtain provisional licensure and teach in PK-12 settings without any formal training in the classroom. Research shows that alternatively licensed teachers, such as these, leave the profession at a much high rate than those who have finished an approved educator preparation program and we know that teacher turnover leads to significant recruitment and training costs for school systems while negatively impacting student achievement and overall teacher effectiveness. Providing teaching candidates with proper preparation and earlier and more frequent opportunities in classrooms will reduce this type of teacher attrition.

Resources Needed:

The graduation checksheets for education majors are comprised mostly of redesigned courses within the existing master’s program including previously required content courses. A few new courses were developed to offer additional scaffolding opportunities (such as field study and first year experience) and foundational material. By redeveloping existing courses and utilizing current undergraduate initiatives to the maximum extent possible, no new resources will be required to implement this new major at this time.

Program Requirements:

In addition to the enclosed graduation checksheet, students who are planning to become licensed will need to meet requirements set forth by the Virginia Department of Education including professional licensure examinations and certifications.
GRADUATION REQUIREMENTS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

Credits and GPA – Completion of a minimum of 120 credits with a minimum overall GPA of 2.5; and in-major GPA of 3.0. (In major GPA includes all EDCI and EDEP courses)

Prerequisites: Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Additional Requirements – Students must submit passing scores on required state licensure examinations.

SATISFACTORY PROGRESS TOWARD DEGREE

University Policy 91 requires a student to make satisfactory progress towards a degree. Additionally, licensure programs require that by the time a student has completed 72 credits, they must have passed all licensure examinations, carry an in-major GPA of 3.0, and be accepted into the educator preparation program.

PATHWAYS TO GENERAL EDUCATION (42 CREDITS)

*unless otherwise indicated, all courses taken to satisfy Pathways General Education must be taken on an A-F basis

Concept 1: Discourse (9 credits)

1F - Foundational

1A - Advanced/Applied

Concept 2: Critical Thinking in the Humanities (6 credits)

Concept 3: Reasoning in the Social Sciences (6 credits)

Concept 4: Reasoning in the Natural Sciences (6 credits)

Concept 5: Quantitative and Computational Thinking (9 credits)

1 https://policies.vt.edu/91-eligibility-for-continued-enrollment.pdf
2 Pre: PSYC 1004 Introduction to Psychology
5a - Advanced/Applied
   EDCI 4244 Curriculum & Instruction in Middle School Mathematics (4-8)³ (3 credits)

Concept 6: Critique and Practice in Design and the Arts (6 Credits)

6d - Design
   3 credits

6a - Arts
   3 credits

Concept 7: Critical Analysis of Identity and Equity in the United States (3 credits)
   HIST 1115 History of the United States (3 credits; also meets Concept 2 requirement)

BACHELOR OF SCIENCE IN EDUCATION IN ELEMENTARY EDUCATION COMMON DEGREE CORE REQUIREMENTS⁴
(22 CREDITS)

   EDCI 1004 Professional Dispositions in Elementary Education (3 credits)
   EDCI 2574 Social Foundations of Education (3 credits)
   EDCI 3234 Foundations of Reading Instruction (PK-6) (3 credits)
   EDCI 3244 Curriculum & Instruction in Elementary Mathematics, PK-3 (3 credits)
   EDCI 3334 Teaching Language Arts in the Elementary Classroom (4 credits)
   EDCI 4554 Educating Exceptional Learners⁵ (3 credits)
   EDEP 2374 Educational Psychology for PK-12 Teachers (3 credits)

MAJOR IN ELEMENTARY EDUCATION WITH LICENSURE REQUIREMENTS (42 CREDITS)

   EDCI 3074 Elementary Curriculum: Methods in Teaching⁶ (3 credits)
   EDCI 3254 Elementary Methods in Science (3 credits)
   EDCI 3354 STEM in Elementary Schools⁷ (3 credits)
   EDCI 3464 Elementary Social Studies Teaching Methods (3 credits)
   EDCI 3474 Assessment & Diagnosis in Elementary Mathematics Classroom (3 credits)
   EDCI 4074 Culturally Responsive Teaching in the Elementary Classroom⁸ (3 credits)
   MATH 1614 Numbers and Operations for Teachers (3 credits)
   MATH 1624 Geometry for Teachers (3 credits)

Elementary Teaching Practicum:
   EDCI 2004 Discovering the Elementary Classroom: Field Studies in Pre-Education (3 credits)
   EDCI 3964 Field Work/Practicum (6 credits)
   EDCI 4964 Field Work/Practicum (9 credits)

FREE ELECTIVE COURSES (14 CREDITS)

120 TOTAL Credits

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³ Pre: MATH 1614, MATH 1624, EDCI 3244
⁴ Unless otherwise indicated, all courses must be taken on an A-F basis; courses satisfying degree core requirements may not be double counted to satisfy other areas of a degree.
⁵ Pre: Junior Standing
⁶ Co: 3964
⁷ Pre: 3254
⁸ Co: 4964
RESOLUTION TO APPROVE NEW UNDERGRADUATE DEGREE
WITH TWO DESIGNATIONS:
BACHELOR OF ARTS IN EDUCATION (B.A.Ed.) IN SECONDARY EDUCATION AND BACHELOR OF SCIENCE IN EDUCATION (B.S.Ed.) IN SECONDARY EDUCATION

WHEREAS, Virginia’s pre-school through 12th grade (PK-12) schools began the 2016-2017 school year with more than 1000 teacher vacancies; and

WHEREAS, there is a documented shortage of qualified PK-12 teachers nationally and within the Commonwealth of Virginia; and

WHEREAS, Governor McAuliffe signed an executive order in December 2017 directing the state’s education board to adopt emergency rules to again allow colleges to offer four-year undergraduate degrees in teaching; and

WHEREAS, according to the 2020-2021 Ten Critical Shortage Teaching Endorsement Areas in Virginia provided by the Commonwealth, the following endorsement areas are included: Mathematics #4, Career and Technical #5, English #8, and History and Social Sciences #10; and

WHEREAS, the School of Education (SOE) in the College of Liberal Arts and Human Sciences (CLAHS) is committed to providing coursework and experiential learning fitting the VT-shaped curriculum to produce licensable graduates with the knowledge, skills, and dispositions of highly qualified PK-12 educators thereby addressing the noted state teacher vacancies; and

WHEREAS, no new resources will be required to initiate the new bachelor’s degree due to redeveloping existing educator preparation courses and utilizing current undergraduate initiatives to the maximum extent possible; and

WHEREAS, the new degree will include two designations: 1) the Bachelor of Arts in Education (B.A.Ed.) in secondary education with endorsement areas in English language arts education, and history and social sciences education, and 2) the Bachelor of Science in Education (B.S. Ed.) in secondary education with endorsement areas in mathematics education and career and technical education areas of agricultural education, business and information technology education, family and consumer sciences education, and marketing education; and

WHEREAS, letters of support have been received from all departments whose courses SOE students would take; and

WHEREAS, the Bachelor of Arts in Education in secondary education and the Bachelor of Science in Education in secondary education with a variety of majors and a requirement that students pass required state licensure exams would be an identifiable curriculum that clearly signal the expertise and career focus of educator preparation; and

WHEREAS, the new degree program with the designations of B.A.Ed. and B.S.Ed. are anticipated to initially attract 30-40 additional students per year interested in pursuing careers in 6th-12th grade teaching to Virginia Tech;

NOW, THEREFORE, BE IT RESOLVED, that the new degree with two designations: Bachelor of Arts in Education in secondary education and Bachelor of Science in Education in secondary education be approved effective fall 2021 and that the proposal be forwarded to the State Council of Higher Education for Virginia (SCHEV) for approval and to the Southern Association of Colleges and Schools (SACS) for notification.

RECOMMENDATION:
That the Board of Visitors approve this resolution to establish this new undergraduate degree.

March 22, 2021
Proposal for New Degrees in Education

Justification:

Teacher Shortage

There is a current documented shortage of qualified PK-12 teachers both nationally and within the Commonwealth of Virginia. According to data from the Virginia Department of Education, the number of unfilled teaching positions in the state nearly doubled between the 2013-2014 and 2017-2018 school years causing Virginia schools to begin the 2016-2017 school year with more than 1000 teacher vacancies. In response, former Gov. Terry McAuliffe signed an executive order in December of 2017 directing the state education board to adopt emergency rules to allow colleges to again offer four-year undergraduate degrees in teaching. In 2018 the General Assembly introduced and passed, among additional changes to the teaching licensure process, legislation permitting colleges and universities to create these programs. Students can now become fully-licensed teachers after earning a four-year undergraduate degree in education.

By October of 2019, the State Council of Higher Education for Virginia approved new programs at fifteen public colleges and universities in the state. Our community partners, including Montgomery County Public Schools, have also indicated a local need for more properly licensed and qualified teachers, while undergraduate admissions recruiters have reported that high-school students are often confused about how to become a PK-12 teacher at Virginia Tech. As other colleges and universities in Virginia begin offering undergraduate licensure, Virginia Tech School of Education will need to offer comparable opportunities in order maintain current enrollment and attract new students.

Critical Shortage Areas

While there are teacher vacancies of all types across the state, there are specific licensure areas that have especially prevalent shortages. The Virginia Department of Education discloses annually, a list of ten Critical Teaching Shortage Areas to the General Assembly based on vacancies and/or a documented lack of qualified applicants for positions. Elementary Education has been near the top of this list since the 2010-2011 school year. Secondary Math and Career and Technical Education have also been in the top half for the same period. Secondary English Language Arts has been included each year and History & Social Sciences has ranked recently, as well.

Because preparation is a key factor influencing teacher recruitment and retention, Virginia Tech School of Education has an opportunity to produce capable educators and
reduce some of these shortages. Offering licensure through undergraduate majors will streamline requirements and lower the overall cost of entering the profession, while still preparing highly qualified teachers for the Commonwealth of Virginia.

Job Market Information

According to the Virginia Employment Commission, both Elementary and Secondary School Teacher are considered high-growth occupations for individuals holding bachelor’s degrees. The number of Elementary School Teacher positions are expected to increase by almost 4000 while Secondary positions close to 3000. The Bureau of Labor Statistics projects a national growth of 3% for Kindergarten and Elementary School Teachers and 4% for High School Teachers over the next 10 years.

Strategic Plan:

Since fall 2018, faculty and staff in the School of Education have met with (and continue to meet with) representatives from the Virginia Department of Education and State Council of Higher Education for Virginia to determine how new regulations will affect our programs. We have also consulted with teacher preparation programs at other colleges and universities regarding their plans for transitioning to undergraduate programs.

The School of Education faculty and staff met as a group in spring 2019 to plan how our new programs would operate and collaborated with impacted departments to determine how we could build programs that would provide appropriate knowledge, skills, and dispositions for future educators while preserving the key student-centered elements of an undergraduate program. Our Science and Music Education programs will remain at the graduate level while Elementary, English Language Arts, History and Social Sciences, Mathematics, and Career and Technical Education programs will transition to undergraduate licensure.

We continue to work with appropriate departments on campus as well as our SCHEV representative and the VDOE to create high-quality undergraduate teacher preparation programs. We have met with the First Year Experience office to plan for students who will have different developmental needs than those we currently serve in our graduate programs and will continue to build relationships with high-school and community college teacher education programs that support students before they enter formal approved licensure programs.

The proposed degrees and majors will be housed in the School of Education within the College of Liberal Arts and Human Sciences. We are proposing two degrees, B.S.Ed. in Elementary Education and B.A.Ed./B.S.Ed. in Secondary Education, based on available CIP codes, the differences in core competencies for licensure established by the Virginia Department of Education, and professional educator standards recognized by the Virginia Tech School of Education.

B.S.Ed. in Elementary Education will contain the Elementary Education PK-6 major with licensure. The content covered in this major is intentionally planned to cover specific
material and practical aspects of teaching young children without much room for deviation. The Elementary Education major includes an emphasis on STEM as well as literacy.

The B.A.Ed./B.S.Ed. in Secondary Education will contain majors where licensure involves students in 6th-12th grade. While the foundational education courses are the same for all majors in Secondary Education, the specific coursework of each licensure area is unique requiring multiple majors. Both B.A.Ed. and B.S.Ed. are included as options within Secondary Education because the individual teaching areas have different professional expectations which are reflected in the required courses.

The graduation checksheets for English Language Arts and History and Social Sciences include a broader array of courses within the subject area allowing students to customize their education based on individual interests. Administrators hiring teachers in these licensure areas expect students to earn a B.A.Ed. and possess individualized specialties. Mathematics and Career and Technical Education requirements, on the other hand, are very scripted to cover the specific fundamental standards of the content area. Administrators hiring in these areas would expect all licensed teachers be proficient in the same content and possess a B.S.Ed. in Secondary Education.

The first students will be able to enroll fall of 2021 and those who are able to transfer into the major could possibly graduate in spring 2023, provided they have taken the appropriate courses. During the transition, any student who would not be able to transfer into and complete the undergraduate degree in 4 years would be allowed to continue through the 5th-year master’s program as it is currently established. A transition is expected by spring 2024. Subsequently, a revised master’s program will be developed for licensed, practicing teachers to further their professional competences.

**Students Served:**

Our new education majors will serve the same audience as the graduate licensure programs with the primary purpose being to reduce the financial barrier of a 5th year of college while still producing teachers who are strong in pedagogy and content knowledge.

Between 2014 and 2019, an average of 231 incoming freshmen indicated an interest in teaching on their Virginia Tech admission applications. In 2019, of those freshmen, 35 declared Pre-Education and Human Sciences, Undecided as their first-choice major. While PreEd Undecided is not a degree-granting major, most of these students will progress to our licensure programs by way of related undergraduate degrees.

The Pre-Education Advising Program (PEAP) currently serves between 300 and 400 students, in multiple majors. PEAP is a part of the School of Education and supports undergraduate students from all majors in moving toward the goal of becoming
competitive applicants and highly qualified educators. Participating students benefit from; advising sessions on specific requirements for state endorsements and graduate school admissions, field experiences in local schools, teacher assessment preparation, professional development workshops, and leadership opportunities in pre-professional student organizations. Not all students who participate will apply to our graduate program.

There are several reasons that pre-education students choose to not continue with graduate school, including: cost, desire to move closer to home, difficulty with prerequisites, the classroom was not what they expected, and alternate licensure opportunities. Each year, graduate licensure programs in the VT School of Education produce 100-150 licensed PK-12 educators. Over the past 5 years, Elementary Education has averaged 25 students per year, while Math, English, Social Studies and CTE (combined into the category of Secondary Education) have averaged around 30.

In the short-term, we anticipate the number of incoming freshmen to mirror what currently applies to the graduate program 25-35 students per degree (not per major). We expect that number to double within the first two years and cap at 75-100 incoming freshmen. Of those, we anticipate 85-90% will complete the degree. We expect to maintain 250-350 undergraduate students in each degree program (elementary and secondary).

For students who do not complete the teacher licensure requirements but still earn the education degree, there are related career opportunities in the field, such as: teaching in private schools or online programs, hospitals providing educational services for long-term school-aged patients, professional tutoring, designing curriculum for textbook companies, developing exams for testing agencies, or working in educational outreach programs for museums/parks or agencies providing professional development to PK-12 teachers. Students who qualify may also apply to one of our graduate programs.

Benefits to Students

Undergraduate education degrees allow a route to licensure without the added expense and time of graduate school. Having clearly visible education majors will allow high-school students, who are specifically interested in teaching, to imagine themselves at Virginia Tech. High-school and community college students who are participating in future educator programs will be able to readily transition into our undergraduate majors instead of going through other programs to be eligible for graduate study. Undergraduate programs also allow more graduates to obtain a full teaching license upon completion of their bachelor’s program.

Undergraduate programs create more opportunities for students to learn their content within the context of teaching it, creating stronger connections between pedagogy and content knowledge. The increased length of time prospective teacher candidates will spend in the program will allow us to properly scaffold their learning and provide valuable feedback throughout the degree. It will also provide students opportunities to
meaningfully reflect on their coursework and teaching experiences as they develop essential educator dispositions.

Finally, offering formal education majors will encourage a sense of belongingness and professional identity among future educators. Sense of belonging and its impact on student success has been well documented in higher education research. A college students' sense of belonging is related to several things, including engagement and retention, motivation, and academic performance. Equally important to education students, is the development of a professional teacher identity. This identity promotes effectiveness and well-being and is developed, in-part, through interactions with peers during shared pre-professional experiences.

Benefits to Community

Maintaining the quality of our program while reducing financial barriers and expediting the licensure process advances the teaching profession, as well. Under certain circumstances, an individual with a bachelor’s degree can obtain provisional licensure and teach in PK-12 settings without any formal training in the classroom. Research shows that alternatively licensed teachers, such as these, leave the profession at a much higher rate than those who have finished an approved educator preparation program and we know that teacher turnover leads to significant recruitment and training costs for school systems while negatively impacting student achievement and overall teacher effectiveness. Providing teaching candidates with proper preparation and earlier and more frequent opportunities in classrooms will reduce this type of teacher attrition.

Resources Needed:

The graduation checksheets for education majors are comprised mostly of redesigned courses within the existing master’s program including previously required content courses. A few new courses were developed to offer additional scaffolding opportunities (such as field study and first year experience) and foundational material. By redeveloping existing courses and utilizing current undergraduate initiatives to the maximum extent possible, no new resources will be required to implement this new major at this time.

Program Requirements:

In addition to the enclosed graduation checksheet, students who are planning to become licensed will need to meet requirements set forth by the Virginia Department of Education including professional licensure examinations and certifications.
GRADUATION REQUIREMENTS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

Credits and GPA – Completion of a minimum of 120 credits with a minimum overall GPA of 2.5; and in-major GPA of 3.0. (In major GPA includes all EDCI and EDEP courses)

Prerequisites - Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Additional Requirements – Students must submit passing scores on required state licensure examinations.

SATISFACTORY PROGRESS TOWARD DEGREE

University Policy 91 requires a student to make satisfactory progress towards a degree. Additionally, licensure programs require that by the time a student has completed 72 credits, they must have passed all licensure examinations, carry an in-major GPA of 3.0, and be accepted into the educator preparation program.

PATHWAYS TO GENERAL EDUCATION (45 CREDITS)

*unless otherwise indicated, all courses taken to satisfy Pathways General Education must be taken on an A-F basis

Concept 1: Discourse (9 credits)

1f - Foundational

   ___ ENGL 1105 First-Year Writing (3 credits)
   ___ ENGL 1106 First-Year Writing (3 credits)

1a - Advanced/Applied

   ___ ENGL 3134 (WGS 3134) Gender and Linguistics (Pre: 1106 or 1204H or COMM 1016) (3 credits)

Concept 2: Critical Thinking in the Humanities (6 credits)

   ___ ENGL 4164 Studies in Shakespeare (Pre: 1106 or 1204H or COMM 1016) (3 credits)
   ___ (3 credits)

Concept 3: Reasoning in the Social Sciences (6 credits)

   ___ ENGL 3144 (RLCL 3144) (SOC 3144) Language and Ethnicity in the United States (Pre: 1106 or 1204H or COMM 1016) (3 credits)
   ___ (3 credits)

Concept 4: Reasoning in the Natural Sciences (6 credits)

   ___ (3 credits)
   ___ (3 credits)

Concept 5: Quantitative and Computational Thinking (9 credits)

5f - Foundational

   ___ (3 credits)
   ___ (3 credits)

5a - Advanced/Applied

   ___ (3 credits)

Concept 6: Critique and Practice in Design and the Arts (6 credits)

6d - Design

   ___ (3 credits)

6a - Arts

   ___ ENGL 2744 Introduction to Creative Writing (Pre: 1106 or 1204H or COMM 1016) (3 credits)

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1 https://policies.vt.edu/91-eligibility-for-continued-enrollment.pdf
Concept 7: Critical Analysis of Identity and Equity in the United States (3 credits)

BACHELOR OF ARTS IN EDUCATION IN SECONDARY EDUCATION COMMON DEGREE CORE REQUIREMENTS

(21 CREDITS)

EDCI 2574 Social Foundations of Education (3 credits)
EDCI 4554 Educating Exceptional Learners (Pre: Junior Standing) (3 credits)
EDCI 4724 Secondary School Teaching Methods I (Pre: Junior Standing) (3 credits)
EDCI 4734 Adolescent Literacy and Reading (3 credits)
EDCI 4744 Secondary School Teaching Methods II (Pre: 4724)(3 credits)
EDEP 2374 Educational Psychology for PK-12 Teachers (Pre: Sophomore Standing) (3 credits)
EDEP 3474 Principles and Practices in PK-12 Assessment (3 credits)

MAJOR IN ENGLISH LANGUAGE ARTS EDUCATION REQUIREMENTS (45 CREDITS)

ENGL 2534 American Literary History (Pre: 1106 or 1204H or COMM 1016) (3 credits)
ENGL 2544 British Literary History (Pre: 1106 or 1204H or COMM 1016) (3 credits)
ENGL 3324 Acts of Interpretation (Pre: 2604) (3 credits)

World Literature (3 credits)
choose one (1) from listbelow
ENGL 3514 Ethnic Literature for Children (Pre: 1106 or 1204H or COMM 1016) (3 credits)
ENGL 3694 Topics in World Novels (Pre: 1106 or 1204H or COMM 1016) (3 credits)

History of the English Language (3 credits)
ten
ENGL 4054 History of the English Language (3 credits)

Writing (6 credits)

ENGL 2604 Introduction to Critical Reading (Pre: 1105 or COMM 1015) (3 credits) and
Choose one (1) from listbelow
ENGL 3315 Playwriting (Pre: 1106 or 1204H or COMM 1016) (3 credits)
ENGL 3704 Creative Writing: Fiction (Pre: 2744) (3 credits)
ENGL 3714 Creative Writing: Poetry (Pre: 2744) (3 credits)
ENGL 3724 Creative Writing: Creative Non-Fiction (Pre: 2744) (3 credits)
ENGL 3764 Technical Writing (Pre: Junior Standing, 1106 or 1204H or COMM 1016) (3 credits)
ENGL 3804 Technical Editing and Style (Pre: 1106 or 1204 or 1204H or COMM 1016) (3 credits)

Underrepresented Authors (6 credits)

Choose two (2) from listbelow
ENGL 2644 (AFST 2644) Introduction to African-American Literature (Pre: 1106 or 1204H or COMM 1016) (3 credits)
ENGL 2808 (AINS 2804) Contemporary Native American Literature (Pre: 1106 or 1204H or COMM 1016) (3 credits)
ENGL 3364 Topics in Literature by Women (Pre: 1106 or 1204H or COMM 1016) (3 credits)
ENGL 3514 Ethnic Literature for Children (Pre: 1106 or 1204H or COMM 1016) (3 credits)
ENGL 3624 Appalachian Literature (Pre: 1106 or 1204H or COMM 1016) (3 credits)
ENGL 3654 Ethnic American Literature (Pre: 1106 or 1204H or COMM 1016) (3 credits)

Secondary Teaching Practicum (18 credits)

ENGL 3734 Community Writing (Pre: 2744) (3 credits)
EDCI 3964 Field Work/Practicum (6 credits)
EDCI 4964 Field Work/Practicum (9 credits)

FREE ELECTIVE COURSES (9 CREDITS)

TOTAL CREDITS 120

2 unless otherwise indicated, all courses must be taken on an A-F basis; courses satisfying degree core requirements may not be double counted to satisfy other areas of a degree.
GRADUATION REQUIREMENTS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

Credits and GPA – Completion of a minimum of 120 credits with a minimum overall GPA of 2.5; and in-major GPA of 3.0. (In major GPA includes all EDCI and EDEP courses)

Prerequisites - Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Additional Requirements – Students must submit passing scores on required state licensure examinations.

SATISFACTORY PROGRESS TOWARD DEGREE

University Policy 91\textsuperscript{1} requires a student to make satisfactory progress towards a degree. Additionally, licensure programs require that by the time a student has completed 72 credits, they must have passed all licensure examinations, carry an in-major GPA of 3.0, and be accepted into the educator preparation program.

PATHWAYS TO GENERAL EDUCATION (45 CREDITS)

*unless otherwise indicated, all courses taken to satisfy Pathways General Education must be taken on an A-F basis

Concept 1: Discourse (9 credits)

1f - Foundational

____ (3 credits)

____ (3 credits)

1a - Advanced/Applied

____ (3 credits)

Concept 2: Critical Thinking in the Humanities (6 credits)

____ HIST 1115 History of the United States (3 credits)

____ HIST 1116 History of the United States (3 credits)

Concept 3: Reasoning in the Social Sciences (6 credits)

____ GEOG 1004 Introduction to Human Geography (3 credits)

____ GEOG 1014 World Regions (3 credits)

Concept 4: Reasoning in the Natural Sciences (6 credits)

____ (3 credits)

____ (3 credits)

Concept 5: Quantitative and Computational Thinking (9 credits)

5f - Foundational

____ GEOG 1084 (FREC 1004) Digital Planet (3 credits)

____ (3 credits)

5a - Advanced/Applied

____ (3 credits)

Concept 6: Critique and Practice in Design and the Arts (6 credits)

6d - Design

____ (3 credits)

6a - Arts

____ (3 credits)

Concept 7: Critical Analysis of Identity and Equity in the United States (3 credits)

____ PSCI 1014 Introduction to United States Government and Politics (3 credits)

\textsuperscript{1}https://policies.vt.edu/91-eligibility-for-continued-enrollment.pdf
BACHELOR OF ARTS IN EDUCATION IN SECONDARY EDUCATION COMMON DEGREE CORE REQUIREMENTS
(21 credits)

- EDCI 2574 Social Foundations of Education (3 credits)
- EDCI 4554 Educating Exceptional Learners (Pre: Junior Standing) (3 credits)
- EDCI 4724 Secondary School Teaching Methods I (Pre: Junior Standing) (3 credits)
- EDCI 4734 Adolescent Literacy and Reading (3 credits)
- EDCI 4744 Secondary School Teaching Methods II (Pre: 4724) (3 credits)
- EDEP 2374 Educational Psychology for PK-12 Teachers (Pre: Sophomore Standing) (3 credits)
- EDEP 3474 Principles and Practices in PK-12 Assessment (3 credits)

MAJOR IN HISTORY AND SOCIAL SCIENCES EDUCATION REQUIREMENTS (42 CREDITS)

Virginia/South History (3 credits)
- choose one (1) from list below
  - HIST 3205 US South (3 credits)
  - HIST 3224 History of Virginia (3 credits)

World History (6 credits)
- HIST 1215 Intro to World History (3 credits)
- HIST 1216 Intro to World History (3 credits)

Economic Development (3 credits)
- HIST 3114 History of Capitalism (3 credits)

History Depth Electives (6 credits)
- Choose two (2) from list of approved courses

Political Science Depth Electives (6 credits)
- PSCI 1024 (IS 1024) Introduction to Comparative Government and Politics (3 credits) and
- choose one (1) from list of approved courses (3 credits) and
- Virginia State and Local Government Civics Module (online)

Research Methods (3 credits)
- Choose one (1) from list below
  - HIST 2004 Historical Methods (3 credits)
  - PSCI 2024 Research Methods in Political Science (3 credits)

Secondary Teaching Practicum (15 credits)
- EDCI 3964 Field Work/Practicum (6 credits)
- EDCI 4964 Field Work/Practicum (9 credits)

FREE ELECTIVE COURSES (12 CREDITS)

TOTAL CREDITS 120

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2 unless otherwise indicated, all courses must be taken on an A-F basis; courses satisfying degree core requirements may not be double counted to satisfy other areas of a degree.

3 See advisor for substitutions

4 not for course credit, certificate of successful completion is part of formal acceptance into teacher preparation program
<table>
<thead>
<tr>
<th>Approved History Depth Courses</th>
<th>Approved Political Science Depth Courses</th>
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<tbody>
<tr>
<td>*HIST 2275 or 2276 African-American History (3 credits)</td>
<td>PSCI 2014 Introduction to Political Theory (3 credits)</td>
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<tr>
<td>*HIST 3144 American Environmental History (3 credits)</td>
<td>PSCI 3015, 3016 (PHIL 3015, 3016) Political Theory (Pre: 2014) (3 credits)</td>
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<td>*HIST 3564 The Cold War (3 credits)</td>
<td>PSCI 3334 Judicial Process (Pre: 1014 or 1014H) (3 credits)</td>
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<td>*RLCL 1214 Medieval World (3 credits)</td>
<td>PSCI 3424 State and Local Government (Pre: 1014 or 1014H) (3 credits)</td>
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<td>HIST 1515 or 1516 History of Africa (3 credits)</td>
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<td>HIST 2104 Topics and Critical Issues in US History (3 credits)</td>
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<td>HIST 2114 Topics Critical Issues in European History (3 credits)</td>
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<td>HIST 2124 Topics Critical Issues in World History (3 credits)</td>
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<td>HIST 2345 History of the Middle East (3 credits)</td>
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<td>HIST 2355 History of China (3 credits)</td>
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<td>HIST 2364 History of Japan (3 credits)</td>
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<td>HIST 2384 (RLCL 2384) Ghandi in the Making of Modern India (3 credits)</td>
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<td>HIST 2715 (STS 2715) History of Technology (3 credits)</td>
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<td>HIST3004 Colonial America (3 credits)</td>
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<td>HIST 3014 The American Revolution (3 credits)</td>
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<td>HIST 3054 American Civil War (3 credits)</td>
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<td>HIST 3064 Emergence of Modern America (3 credits)</td>
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<td>HIST 3084 Recent America (3 credits)</td>
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<td>HIST 3234 The North American West (3 credits)</td>
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<td>HIST 3304 The World of Alexander the Great (3 credits)</td>
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<td>HIST 3334 The Renaissance (3 credits)</td>
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<td>HIST 3344 The Era of Reformation (3 credits)</td>
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<td>HIST 3364 Age of Revolution and Napoleon (3 credits)</td>
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<td>HIST 3544 World War II (3 credits)</td>
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<td>HIST 3554 Age of Globalization (3 credits)</td>
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<td>HIST 3714 War and Medicine (3 credits)</td>
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<tr>
<td>HIST 3774 Digital History (3 credits)</td>
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</table>

Alternate Economics Courses

| ECON 2005 Principles of Economics (PW-3)                           |                                                             |

3
College of Liberal Arts and Human Sciences  
School of Education  
Bachelor of Science in Education in Secondary Education  
Major in Mathematics Education  
For students entering under UG Catalog 2021-2022

GRADUATION REQUIREMENTS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

Credits and GPA – Completion of a minimum of 120 credits with a minimum overall GPA of 2.5; and in-major GPA of 3.0. (In major GPA includes all EDCI and EDEP courses)

Prerequisites - Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Additional Requirements – Students must submit passing scores on required state licensure examinations.

SATISFACTORY PROGRESS TOWARD DEGREE

University Policy 91 requires a student to make satisfactory progress towards a degree. Additionally, licensure programs require that by the time a student has completed 72 credits, they must have passed all licensure examinations, carry an in-major GPA of 3.0, and be accepted into the educator preparation program.

PATHWAYS TO GENERAL EDUCATION (47 CREDITS)

*unless otherwise indicated, all courses taken to satisfy Pathways General Education must be taken on an A-F basis

Concept 1: Discourse (9 credits)
   1f - Foundational
       _____ ENGL 1105 First-Year Writing (3 credits) or COMM 1015 Communication Skills (3 credits)
       _____ ENGL 1106 First-Year Writing (3 credits) or COMM 1016 Communication Skills (3 credits)
   1a - Advanced/Applied
       _____ (3 credits)

Concept 2: Critical Thinking in the Humanities (6 credits)
       (3 credits)
       (3 credits)

Concept 3: Reasoning in the Social Sciences (6 credits)
       (3 credits)
       (3 credits)

Concept 4: Reasoning in the Natural Sciences (6 credits)
       (3 credits)
       (3 credits)

Concept 5: Quantitative and Computational Thinking (11 credits)
   5f - Foundational
       _____ MATH 1225 Calculus of a Single Variable (4 credits)
       _____ MATH 1226 Calculus of a Single Variable (Pre: Grade of at least C- in 1225) (4 credits)
   5a - Advanced/Applied
       _____ STAT 3005 Statistical Methods (Co: MATH 1206 or MATH 1226. Pre: MATH 1205 or MATH 1225) (3 credits)

Concept 6: Critique and Practice in Design and the Arts (6 credits)
   6d - Design
       _____ (3 credits)
   6a - Arts
       _____ (3 credits)

Concept 7: Critical Analysis of Identity and Equity in the United States (3 credits)
       (3 credits)

1 https://policies.vt.edu/91-eligibility-for-continued-enrollment.pdf
BACHELOR OF SCIENCE IN EDUCATION IN SECONDARY EDUCATION COMMON DEGREE CORE REQUIREMENTS

(21 CREDITS)

_____ EDCI 2574 Social Foundations of Education (3 credits)
_____ EDCI 4554 Educating Exceptional Learners (Pre: Junior Standing) (3 credits)
_____ EDCI 4724 Secondary School Teaching Methods I (Pre: Junior Standing) (3 credits)
_____ EDCI 4734 Adolescent Literacy and Reading (3 credits)
_____ EDCI 4744 Secondary School Teaching Methods II (Pre: 4724) (3 credits)
_____ EDEP 2374 Educational Psychology for PK-12 Teachers (Pre: Sophomore Standing) (3 credits)
_____ EDEP 3474 Principles and Practices in PK-12 Assessment (3 credits)

MAJOR IN MATHEMATICS EDUCATION REQUIREMENTS (51 CREDITS)

MATH 1004 Discovering Mathematics I (Pass/Fail only) (1 credit)
MATH 1044 Discovering Mathematics II (2 credits)
MATH 2114 Introduction to Linear Algebra (Pre: 1225 or 1226) (3 credits)
MATH 2204 Introduction to Multivariable Calculus (Pre: 1226) (3 credits)
MATH 3034 Introduction to Proofs (Pre: 2114 or 2114H or 2405H) (3 credits)
MATH 3124 Modern Algebra (Pre: 3034) (3 credits)
MATH 3224 Advanced Calculus (Pre: (2224 or 2224H or 2204 or 2204H or 2406H or CMDA 2005), MATH 3034) (3 credits)
MATH 4044 History of Mathematics (Pre: Senior Standing) (3 credits)
MATH 4334 College Geometry (Pre: 1114 or 2114 or 2114H or 2405H, 1226) (3 credits)
MATH 4625 Mathematics for Secondary Teachers I (Pre: 3034) (3 credits)
MATH 4626 Mathematics for Secondary Teachers II (Pre: 3034) (3 credits)
EDCI 4244 Curriculum and Instruction in the Middle School Classroom (4-8) (3 credits)

Computer Programming (3 credits)

_____ choose one (1) from list below
CS 1044 Introduction to Programming in C++ (3 credits)
CS 1054 Introduction to Programming in Java (3 credits)
CS 1064 Introduction to Programming in Python (3 credits)
CS 1114 Introduction to Software Design (3 credits)

Secondary Teaching Practicum (15 credits)

_____ EDCI 3964 Field Work/Practicum (6 credits)
_____ EDCI 4964 Field Work/Practicum (9 credits)

FREE ELECTIVE COURSES (1 CREDIT)

TOTAL CREDITS 120

2 unless otherwise indicated, all courses must be taken on an A-F basis; courses satisfying degree core requirements may not be double counted to satisfy other areas of a degree.
College of Liberal Arts and Human Sciences  
School of Education  
Bachelor of Science in Education in Secondary Education  
Major in Career and Technical Education - Agricultural Education
For students entering under UG Catalog 2021-2022

GRADUATION REQUIREMENTS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

Credits and GPA – Completion of a minimum of 120 credits with a minimum overall GPA of 2.5; and in-major GPA of 3.0. (In major GPA includes all ED CI, ED CT, and EDEP courses)

Prerequisites - Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Additional Requirements – Students must submit passing scores on required state licensure examinations.

SATISFACTORY PROGRESS TOWARD DEGREE

University Policy 91 requires a student to make satisfactory progress towards a degree. Additionally, licensure programs require that by the time a student has completed 72 credits, they must have passed all licensure examinations, carry an in-major GPA of 3.0, and be accepted into the educator preparation program.

PATHWAYS TO GENERAL EDUCATION (42 CREDITS)

*unless otherwise indicated, all courses taken to satisfy Pathways General Education must be taken on an A-F basis

Concept 1: Discourse (9 credits)
1f - Foundational
   ______ ENGL 1105 First-Year Writing (3 credits)
   ______ ENGL 1106 First-Year Writing (3 credits)
1a - Advanced/Applied
   ______ ALCE 2414 (AINS 2414) Identity and Inclusion in Agriculture and Life Science (Pre: ENGL 1106) (3 credits, also meets Concept 7)

Concept 2: Critical Thinking in the Humanities (6 credits)
   ______ FREC 2554 (LAR 2554) (NR 2554) Leadership for Global Sustainability (3 credits)
   ______ (3 credits)

Concept 3: Reasoning in the Social Sciences (6 credits)
   ______ AAEC 1005 Economics of Food and Fiber System (3 credits)
   ______ AAEC 1006 Economics of Food and Fiber System (3 credits)

Concept 4: Reasoning in the Natural Sciences (6 credits)
   ______ CHEM 1035 General Chemistry (3 credits)
   ______ CHEM 1036 General Chemistry (Co: MATH 1025 or MATH 1225) (3 credits)

Concept 5: Quantitative and Computational Thinking (9 credits)
5f - Foundational
   ______ GEOG 1084 (FREC 1004) Digital Planet (3 credits)
   ______ MATH 1025 Elementary Calculus (3 credits)
5a - Advanced/Applied
   ______ (3 credits)

Concept 6: Critique and Practice in Design and the Arts (6 credits)
6d - Design
   ______ HORT 2164 Floral Design² (3 credits)
6a - Arts
   ______ (3 credits)

Concept 7: Critical Analysis of Identity and Equity in the United States (3 credits)
   ______ ALCE 2414 (AINS 2414) Identity and Inclusion in Agriculture and Life Science (Pre: ENGL 1106) (3 credits, also meets Concept 1a)

1 https://policies.vt.edu/91-eligibility-for-continued-enrollment.pdf
2 Additional Fee Required
BACHELOR OF SCIENCE IN EDUCATION IN SECONDARY EDUCATION COMMON DEGREE CORE REQUIREMENTS

(21 CREDITS)

- EDCI 2574 Social Foundations of Education (3 credits)
- EDCI 4554 Educating Exceptional Learners (Pre: Junior Standing) (3 credits)
- EDCI 4724 Secondary School Teaching Methods I (Pre: Junior Standing) (3 credits)
- EDCI 4734 Adolescent Literacy and Reading (3 credits)
- EDCI 4744 Secondary School Teaching Methods II (Pre: 4724) (3 credits)
- EDEP 2374 Educational Psychology for PK-12 Teachers (Pre: Sophomore Standing) (3 credits)
- EDEP 3474 Principles and Practices in PK-12 Assessment (3 credits)

MAJOR IN CAREER AND TECHNICAL EDUCATION - AGRICULTURAL EDUCATION REQUIREMENTS (56 CREDITS)

ALS 1234 CALS First Year Seminar (1 credit)
ALCE 3004 Educational Programs in Agricultural and Life Sciences (3 credits)
ALCE 3624 Communicating Agriculture & Life Sciences in Writing (3 credits)
ALCE 4064 Ag Mechanical Lab Management (3 credits)
ALCE/EDCT 4034 Methods of Planning Educational Programs for Agriculture (Pre: ALCE 3004) (3 credits)
ALCE/EDCT 4884 Youth Program Management (3 credits)
EDCT 4624 Managing CTE Programs (3 credits)
APSC 1454 Introduction to Animal & Poultry Science (Co: 1464) (3 credits)
APSC 1464 Animal and Poultry Science Laboratory (Co: 1454) (1 credit)
BSE 2094 Introduction to Metal Fabrication (1 credit)
BSE 2484 Engine and Power Train Technology (Pre: MATH 1016 or MATH 1025) (3 credits)
CSES 2444 Agronomic Crops (3 credits)
CSES 3114 (ENSC 3114) (GEOS 3614) Soils (Pre: CHEM 1036. Co: 3124) (3 credits)
CSES 3124 (ENSC 3124) (GEOS 3624) Soils Laboratory (Co: 3114) (1 credit)
ENSC 3604 Fundamentals of Environmental Science (Pre: BIOL 1105 or CHEM 1035) (3 credits)
FREC 2004 Forest Ecosystems (3 credits)
HORT 2224 Horticulture Science and Industry (2 credits)
SBIO 2614 Introduction to Forest Products Marketing (3 credits)

Field-Based Requirements (11 credits)

ALCE 4024 Managing Agricultural Supervised Occupational Experience Project (2 credits)
EDCT/ALCE 4754 Internship in Education (3 credits)
EDCT/ALCE 4964 Field Work/Practicum (6 credits)

FREE ELECTIVE COURSES (1 CREDIT)

TOTAL CREDITS 120

3 unless otherwise indicated, all courses must be taken on an A-F basis; courses satisfying degree core requirements may not be double counted to satisfy other areas of a degree.
College of Liberal Arts and Human Sciences
School of Education
Bachelor of Science in Education in Secondary Education
Major in Career and Technical Education
Option in Family and Consumer Sciences Education
For students entering under UG Catalog 2021-2022

GRADUATION REQUIREMENTS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

Credits and GPA – Completion of a minimum of 120 credits with a minimum overall GPA of 2.5; and in-major GPA of 3.0. (In major GPA includes all EDCI and EDEP courses)

Prerequisites - Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Additional Requirements – Students must submit passing scores on required state licensure examinations.

SATISFACTORY PROGRESS TOWARD DEGREE

University Policy 91\(^1\) requires a student to make satisfactory progress towards a degree. Additionally, licensure programs require that by the time a student has completed 72 credits, they must have passed all licensure examinations, carry an in-major GPA of 3.0, and be accepted into the educator preparation program.

PATHWAYS TO GENERAL EDUCATION (42 CREDITS)

*unless otherwise indicated, all courses taken to satisfy Pathways General Education must be taken on an A-F basis

Concept 1: Discourse (9 credits)

1f - Foundational
   ___ ENGL 1105 First-Year Writing (3 credits)
   ___ ENGL 1106 First-Year Writing (3 credits)

1a - Advanced/Applied
   ___ COMM 2004 Public Speaking (Pre: Sophomore Standing) (3 credits)

Concept 2: Critical Thinking in the Humanities (6 credits)

___ RLCL 2204 (WGS2204) (AFST 2204) Race and Gender in Religion and Culture (also meets Concept 7) (3 credits)
___ PHIL 2304 Global Ethics (3 credits)

Concept 3: Reasoning in the Social Sciences (6 credits)

___ PSYC 1004 Introductory Psychology (3 credits)
___ PSYC 2034 Developmental Psychology (Pre: 1004) (3 credits)

Concept 4: Reasoning in the Natural Sciences (6 credits)

___ (3 credits)
___ (3 credits)

Concept 5: Quantitative and Computational Thinking (9 credits)

5f - Foundational
   ___ HIST 2604 (SOC 2604) (STS 2604) Introduction to Data in Social Context or SOC 2104 (HD 2104) Quantitative Approaches to Community Research (3 credits)
   ___ CONS 2304 Consumer and Family Finances (3 credits)

5a - Advanced/Applied
   ___ (3 credits)

Concept 6: Critique and Practice in Design and the Arts (6 credits)

6d - Design
   ___ RED 2604 Residential Design (3 credits)

6a - Arts

\(^1\) https://policies.vt.edu/91-eligibility-for-continued-enrollment.pdf
AHRM 1014 Design and Art for Consumers (3 credits)

Concept 7: Critical Analysis of Identity and Equity in the United States (3 credits)

RLCL 2204 (WGS 2204) (AFST 2204) Race and Gender in Religion and Culture (also meets Concept 2) (3 credits)

**BACHELOR OF SCIENCE IN EDUCATION IN SECONDARY EDUCATION COMMON DEGREE CORE REQUIREMENTS**

(21 CREDITS)

- EDCI 2574 Social Foundations of Education (3 credits)
- EDCI 4554 Educating Exceptional Learners (Pre: Junior Standing) (3 credits)
- EDCI 4724 Secondary School Teaching Methods I (Pre: Junior Standing) (3 credits)
- EDCI 4734 Adolescent Literacy and Reading (3 credits)
- EDCI 4744 Secondary School Teaching Methods II (Pre: 4724) (3 credits)
- EDEP 2374 Educational Psychology for PK-12 Teachers (Pre: Sophomore Standing) (3 credits)
- EDEP 3474 Principles and Practices in PK-12 Assessment (3 credits)

**MAJOR IN CAREER AND TECHNICAL EDUCATION REQUIREMENTS (18 CREDITS)**

- EDCT 2604 Introduction to CTE (3 credits)
- EDCT 4624 Managing CTE Programs (3 credits)
- EDCT/ALCE 4884 Youth Program Management (3 credits)

Field-Based Requirements (9 credits)

- EDCT 3964 Field Work/Practicum (3 credits)
- EDCT 4964 Field Work/Practicum (6 credits)

**OPTION IN FAMILY AND CONSUMER SCIENCES EDUCATION REQUIREMENTS (39 CREDITS)**

- AHRM 2404 Consumer Rights (3 credits)
- CONS 3404 Consumer Education Strategies (Pre: 2304 and AHRM 2404) (3 credits)
- EDCT 2964 Industry Field Experience (2 credits)
- FMD 1204 Clothing and People (3 credits)
- HNFE 1004 Foods, Nutrition, and Exercise (3 credits)
- HTM 3414 Food Preparation, Purchasing and Management3 (Pre: Junior Standing) (4 credits)
- RED 2614 Introduction Residential Technologies (2 credits)
- RED 2634 Residential Technologies Lab (Co: 2614) (1 credit)
- RED 2644 Housing and the Consumer (3 credits)
- RED 4664 Universal Design (3 credits)
- SOC 1004 Introductory Sociology (3 credits)
- SOC 2014 Sociology of Intimate Relationships (3 credits)
- SOC 3714 Sociology of Aging (Pre: 1004) (3 credits)
- SOC 4014 Sociology of the Family (Pre: 2014) (3 credits)

**FREE ELECTIVE COURSES (0 CREDITS)**

TOTAL CREDITS 120

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2 unless otherwise indicated, all courses must be taken on an A-F basis; courses satisfying degree core requirements may not be double counted to satisfy other areas of a degree.

3 Additional Fee Required
GRADUATION REQUIREMENTS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

Credits and GPA – Completion of a minimum of 120 credits with a minimum overall GPA of 2.5; and in-major GPA of 3.0. (In major GPA includes all EDCI and EDEP courses)

Prerequisites - Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Additional Requirements – Students must submit passing scores on required state licensure examinations.

SATISFACTORY PROGRESS TOWARD DEGREE

University Policy 91 requires a student to make satisfactory progress towards a degree. Additionally, licensure programs require that by the time a student has completed 72 credits, they must have passed all licensure examinations, carry an in-major GPA of 3.0, and be accepted into the educator preparation program.

PATHWAYS TO GENERAL EDUCATION (46 CREDITS)

*unless otherwise indicated, all courses taken to satisfy Pathways General Education must be taken on an A-F basis

Concept 1: Discourse (9 credits)

1f - Foundational

_____ ENGL 1105 First-Year Writing (3 credits)

1a - Advanced/Applied

_____ ENGL 1106 First-Year Writing (3 credits)

Concept 2: Critical Thinking in the Humanities (6 credits)

_____ PHIL 2304 Global Ethics (3 credits)

_____ BIT 4604 Data Governance, Privacy, and Ethics (Pre: 2405 or CMDA 2014 or CS 1114 or CS 1054 or CS 1064) (3 credits)

Concept 3: Reasoning in the Social Sciences (6 credits)

_____ ECON 2005 Principles of Economics (3 credits)

_____ ECON 2006 Principles of Economics (3 credits)

Concept 4: Reasoning in the Natural Sciences (6 credits)

_____ (3 credits)

_____ (3 credits)

Concept 5: Quantitative and Computational Thinking (10 credits)

5f - Foundational

_____ MATH 1524 Business Calculus (4 credits)

_____ BIT 2405 Introduction to Business Statistics, Analytics, & Modeling (Pre: MATH 1524... see catalog for more) (3 credits)

5a - Advanced/Applied

_____ AAEC 2104 Personal Financial Planning (3 credits)

Concept 6: Critique and Practice in Design and the Arts (6 credits)

6d - Design

_____ MGT 2064 Foundations Entrepreneurship (3 credits)

6a - Arts

_____ (3 credits)

Concept 7: Critical Analysis of Identity and Equity in the United States (3 credits)

_____ MGT 3444 Multicultural Diversity in Organizations (Pre: Junior Standing) (3 credits)

1 https://policies.vt.edu/91-eligibility-for-continued-enrollment.pdf
BACHELOR OF SCIENCE IN EDUCATION IN SECONDARY EDUCATION COMMON DEGREE CORE REQUIREMENTS
(21 CREDITS)

- EDCI 2574 Social Foundations of Education (3 credits)
- EDCI 4554 Educating Exceptional Learners (Pre: Junior Standing) (3 credits)
- EDCI 4724 Secondary School Teaching Methods I (Pre: Junior Standing) (3 credits)
- EDCI 4734 Adolescent Literacy and Reading (3 credits)
- EDCI 4744 Secondary School Teaching Methods II (Pre: 4724) (3 credits)
- EDEP 2374 Educational Psychology for PK-12 Teachers (Pre: Sophomore Standing) (3 credits)
- EDEP 3474 Principles and Practices in PK-12 Assessment (3 credits)

MAJOR IN CAREER AND TECHNICAL EDUCATION REQUIREMENTS (18 CREDITS)

- EDCT 2604 Introduction to CTE (3 credits)
- EDCT 4624 Managing CTE Programs (3 credits)
- EDCT/ALCE 4884 Youth Program Management (3 credits)

Field-Based Requirements (9 credits)

- EDCT 3964 Field Work/Practicum (3 credits)
- EDCT 4964 Field Work/Practicum (6 credits)

OPTION IN BUSINESS AND INFORMATION TECHNOLOGY EDUCATION REQUIREMENTS (29 CREDITS)

- ACIS 1504 Introduction to Business Analytics & Business Intelligence (3 credits)
- ACIS 2115 Principles of Accounting (Pre: Sophomore standing) (3 credits)
- ACIS 2116 Principles of Accounting II (Pre: A grade of C- or better in ACIS 2115) (3 credits)
- EDCT 1474 Computer Information Systems (3 credits)
- EDCI 2964 Field Study/Practicum (2 credits)
- FIN 2114 Investments and Financial Literacy (3 credits)
- FIN 3054 Legal and Ethical Environment of Business (Pre: Junior Standing) (3 credits)
- HTM 2314 (MGT 2314) Introduction to International Business (3 credits)
- MGT 3304 Management Theory and Leadership Practice (Pre: Sophomore standing) (3 credits)
- MKTG 3104 Marketing Management (Pre: Junior Standing) (3 credits)

FREE ELECTIVE COURSES (6 CREDITS)

TOTAL CREDITS 120

2 unless otherwise indicated, all courses must be taken on an A-F basis; courses satisfying degree core requirements may not be double counted to satisfy other areas of a degree.
GRADUATION REQUIREMENTS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

Credits and GPA – Completion of a minimum of 120 credits with a minimum overall GPA of 2.5; and in-major GPA of 3.0. (In major GPA includes all EDCI and EDEP courses)

Prerequisites - Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Additional Requirements – Students must submit passing scores on required state licensure examinations.

SATISFACTORY PROGRESS TOWARD DEGREE

University Policy 91 requires a student to make satisfactory progress towards a degree. Additionally, licensure programs require that by the time a student has completed 72 credits, they must have passed all licensure examinations, carry an in-major GPA of 3.0, and be accepted into the educator preparation program.

PATHWAYS TO GENERAL EDUCATION (46 CREDITS)

*unless otherwise indicated, all courses taken to satisfy Pathways General Education must be taken on an A-F basis

Concept 1: Discourse (9 credits)

1f - Foundational

____ COMM 1015 Communication Skills (3 credits)
____ COMM 1016 Communication Skills (3 credits)

1a - Advanced/Applied

____ (3 credits)

Concept 2: Critical Thinking in the Humanities (6 credits)

____ STS 2254 Innovation in Context (3 credits)
____ (3 credits)

Concept 3: Reasoning in the Social Sciences (6 credits)

____ ECON 2005 Principles of Economics (3 credits)
____ ECON 2006 Principles of Economics (3 credits)

Concept 4: Reasoning in the Natural Sciences (6 credits)

____ (3 credits)
____ (3 credits)

Concept 5: Quantitative and Computational Thinking (10 credits)

5f - Foundational

____ MATH 1524 Business Calculus (4 credits)
____ BIT 2405 Introduction to Business Statistics, Analytics, & Modeling (Pre: MATH 1524... see catalog for more) (3 credits)

5a - Advanced/Applied

____ 3 credits)

Concept 6: Critique and Practice in Design and the Arts (6 credits)

6d - Design

____ HTM 3424 Event Management (Pre: Sophomore standing) (3 credits)

6a - Arts

____ (3 credits)

Concept 7: Critical Analysis of Identity and Equity in the United States (3 credits)

____ MGT 3444 Multicultural Diversity in Organizations (Pre: Junior Standing) (3 credits)

1 https://policies.vt.edu/91-eligibility-for-continued-enrollment.pdf
BACHELOR OF SCIENCE IN EDUCATION IN SECONDARY EDUCATION
COMMON DEGREE CORE REQUIREMENTS (21 CREDITS)

- EDCI 2574 Social Foundations of Education (3 credits)
- EDCI 4554 Educating Exceptional Learners (Pre: Junior Standing) (3 credits)
- EDCI 4724 Secondary School Teaching Methods I (Pre: Junior Standing) (3 credits)
- EDCI 4734 Adolescent Literacy and Reading (3 credits)
- EDCI 4744 Secondary School Teaching Methods II (Pre: 4724) (3 credits)
- EDEP 2374 Educational Psychology for PK-12 Teachers (Pre: Sophomore Standing) (3 credits)
- EDEP 3474 Principles and Practices in PK-12 Assessment (3 credits)

MAJOR IN CAREER AND TECHNICAL EDUCATION REQUIREMENTS (18 CREDITS)

- EDCT 2604 Introduction to CTE (3 credits)
- EDCT 4624 Managing CTE Programs (3 credits)
- EDCT/ALCE 4884 Youth Program Management (3 credits)

Field-Based Requirements (9 credits)

- EDCT 3964 Field Work/Practicum (3 credits)
- EDCT 4964 Field Work/Practicum (6 credits)

OPTION IN MARKETING EDUCATION REQUIREMENTS (33 CREDITS)

- ACIS 1504 Introduction to Bus Analytics and Bus Intelligence (3 credits)
- ACIS 2115 Principles of Accounting (Pre: Sophomore standing) (3 credits)
- CMST 3214 Professional Communication (Pre: COMM 1016 or COMM 2004) (3 credits)
- MGT 3304 Management Theory and Leadership Practice (Pre: Sophomore standing) (3 credits)
- MKTG 3104 Marketing Management (Pre: Junior Standing) (3 credits)
- MKTG 3504 Advertising (Pre: 3104 or 3104H) (3 credits)
- MKTG 4204 Consumer Behavior (Pre: 3104 or 3104H) (3 credits)
- MKTG 4554 Relationships Among Buyers and Sellers (Pre: 3104 or 3104H) (3 credits)
- MKTG 4604 Retail Management (Pre: 3104 or 3104H) (3 credits)
- MKTG 4704 International Marketing (Pre: 3104 or 3104H) (3 credits)
- MKTG 4774 Advanced Professional Selling (Pre: 4554, 4204, 3104 or 3104H) (3 credits)

FREE ELECTIVE COURSES (2 CREDITS)

TOTAL CREDITS 120

2 unless otherwise indicated, all courses must be taken on an A-F basis; courses satisfying degree core requirements may not be double counted to satisfy other areas of a degree.
TO: Curriculum Committee Members

FROM: Nancy Bodenhor'7
Associate Director, Office of Academic Programs, School of Education

RE: 2021 B.S. Ed./B.A.Ed. in Secondary Education (new degree)

DATE: January 24, 2020

The Virginia Tech School of Education is requesting approval for the addition of a Bachelor's degree in Secondary Education. This new degree will provide us the opportunity to offer a four-year opportunity for those students who intend to join the teaching profession. For the past decade, Virginia has limited Education degrees to graduate degrees, and just opened this possibility in 2019. The Bachelor's degree was re-established as one response to a critical teacher shortage, of which Math, English, History, and Career and Technical Education have been in the top ten in Virginia during the last five years. We are eager to be part of the solution and provide well prepared teachers for our public school districts.

Education degrees are monitored by the Virginia Department of Education for the required licensure. The degree checksheet is being developed to meet all of these requirements. Our goal is to have all approvals in place to admit students in 2021 and 2022.

The School of Education does not require additional resources to offer this new degree, as the resources will be redirected and/or shared with the cmTent graduate program.
AAEC Courses on Education Checksheets
3 messages

Dawn Knight <dknight1@vt.edu>  
To: mattholt@vt.edu  

Hello Dr. Holt,  
I am putting together undergraduate curriculum committee program proposals for new Education majors and I was hoping to get written support from your department allowing us to include courses on our graduation checksheets. Currently we are submitting proposals for Career and Technical Education which includes four proposed majors: Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. The following have requested permission to include courses from your department as Pathways requirements on graduation checksheets.

I am told that if you are willing to agree, an email reply to that effect is sufficient.

Agricultural Education
AAEC 1005 Econ Food Fiber Sys
AAEC 1006 Econ Food Fiber Syst

Business and Information Technology Education
AAEC 2104 Personal Financial Planning

Marketing Education
AAEC 2104 Personal Financial Planning

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction? Thank you for your time.

--
Dawn Knight-Withers, MAEd  
Pre-Education Advising Coordinator, Virginia Tech School of Education

Holt, Matthew <mattholt@vt.edu>  
To: "Knight, Dawn" <dknight1@vt.edu>  

Hi Dawn,

I have checked with the current instructors of the classes listed below, and all are enthusiastic about the opportunity to be included as meeting various Pathways requirements for the new majors you are proposing. In short, as Head of the Department of Agricultural and Applied Economics I agree with and support what you have outlined below vis-à-vis the courses offered in my department.

Please let me know if you require anything further from me/us.

Best regards,

Matt

Matt Holt | Virginia Tech  
Professor and Department Head  
Ag & Applied Economics
Hello Dawn,

We can handle the 8 to 10 Career and technical Education students in the classes you request. We restrict these courses to Pamplin College students due to capacity constraints. I summarize the semester that are likely to be open for each course below.

Jack Maher

Career and Technical Education

ACIS 1504 Introduction to Bus Analytics and Bus Intelligence (Spring, Summer, Winter)
ACIS 2115 Principles of Accounting (Fall, Winter, Summer)
ACIS 2116 Principles of Accounting II (Spring, Winter, Summer)

John J. (Jack) Maher
Department Head and
Tom Wells/Kathy Dargo Professor
Dept. of Accounting and Information Systems
Pamplin College of Business - Virginia Tech
Blacksburg, VA 24061
USA

From: Dawn Knight <dknight1@vt.edu>
Sent: Friday, August 21, 2020 12:39 PM
To: Maher, John <jmaher@vt.edu>
Cc: Bodenhorn, Nancy <nanboden@vt.edu>
Subject: Business Courses on Education Checksheets

Hello Dr. Maher,

I hope this finds you well and ready to jump into fall semester! After considering feedback from SCHEV, the Department of Education, and affected departments, we have made some adjustments to our program proposals. Thank you to everyone who shared their thoughts.

Today I am writing to ask your department's permission to include the courses listed below on the graduation checksheet for our proposed Career and Technical Education major. The content from these courses meets VDOE licensure competencies in Marketing Education and Business and Information Technology Education. We do not expect more than 8 or 10 students to choose these licensure options each year.

ACIS 1504 Introduction to Bus Analytics and Bus Intelligence
ACIS 2115 Principles of Accounting
ACIS 2116 Principles of Accounting II

Thank you for your time. I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

--
AHRM Courses on Education Checksheet
3 messages

Dawn Knight <dknight1@vt.edu>  
To: Julia Beamish <jbeamish@vt.edu>  
Cc: Nancy Bodenhorn <nanboden@vt.edu>, "Dr. Joseph Mukuni" <mjoseph7@vt.edu>  

Hi Julia,
I am currently putting together an undergraduate curriculum committee program proposal for a new **Family and Consumer Sciences Education** major and I was hoping to get written support from your department allowing us to include the following courses on the graduation checksheet.

- AHRM 1014 Design and Art for Consumers (as Pathways)
- CONS 2304 Consumer and Family Finances (as Pathways)
- CONS 3504 Resource Management for Individuals and Families
- FMD 1204 Clothing and People
- FMD 3224 Apparel Production
- RED 2604 Residential Design (as Pathways)
- RED 2644 Housing and the Consumer

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Dustin Read <dcread@vt.edu>  
To: Julia Beamish <jbeamish@vt.edu>  
Cc: Dawn Knight <dknight1@vt.edu>, Nancy Bodenhorn <nanboden@vt.edu>, "Dr. Joseph Mukuni" <mjoseph7@vt.edu>, Chelsey Hancock <chelseyh@vt.edu>  

Dawn,
Thanks for inquiring about including some AHRM courses on your checksheet. We generally have capacity in all of the courses you noted except for CONS 3504 and FMD 3224, so I'd welcome you to list all but those two. Please let me know if you have any additional questions.

Best,
Dustin

On Thu, Jul 16, 2020 at 7:25 AM Julia Beamish <jbeamish@vt.edu> wrote:
Hi Dawn, I am no longer department head of AHRM. I'm copying Dustin Read, new head, on this email, so that he can address this request. Thank you.
Julia
[Quoted text hidden]

Dawn Knight <dknight1@vt.edu>  
To: Dustin Read <dcread@vt.edu>  
Cc: Julia Beamish <jbeamish@vt.edu>, Nancy Bodenhorn <nanboden@vt.edu>, "Dr. Joseph Mukuni" <mjoseph7@vt.edu>, Chelsey Hancock <chelseyh@vt.edu>  

Thank you!
[Quoted text hidden]
Request to include AHRM Courses on FCS Checksheet

3 messages

Dawn Knight <dknight1@vt.edu>  Tue, Aug 4, 2020 at 3:02 PM
To: Dustin Read <dcread@vt.edu>

Hi Dustin,
Here is a list of additional courses we would like to add to our new Family and Consumer Sciences Education major graduation checksheet based on our conversation last week.

- AHRM 2404 Consumer Rights
- CONS 3404 Consumer Education Strategies
- RED 2614/34 Intro Residential Technologies / Lab
- RED 4644 Universal Design

I am told that if you are willing to agree, an email response to that effect is sufficient.

Thank you!

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Dustin Read <dcread@vt.edu>  Tue, Aug 4, 2020 at 3:13 PM
To: Dawn Knight <dknight1@vt.edu>

Dawn,

Sorry for the slow response! Please go ahead and include the courses on your checksheet.

Best,
Dustin

Dawn Knight <dknight1@vt.edu>  Tue, Aug 4, 2020 at 3:32 PM
To: Dustin Read <dcread@vt.edu>

Thank you! :)

[Quoted text hidden]
Hi Donna,

I am currently putting together the undergraduate curriculum committee program proposal for the Agricultural Education major and I was hoping to get written support from your department allowing us to include ALCE 2414 Identity and Inclusion in Agriculture, ALCE 3004 Educational Programs in Agricultural and Life Sciences, and ALCE 4064 Ag Mechanical Lab Management on the graduation checksheet.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

Thank you!

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Rutherford, Tracy <trutherford@vt.edu>
Wed, Jul 15, 2020 at 2:20 PM

Dawn,

We agree to the inclusion of ALCE 2414, ALCE 3004, and ALCE 4064 on the graduation checksheet for the agricultural education major.

Thank you,
TR
Yes, also include ALCE 4024.

TR

Sent via the Samsung Galaxy 8, please excuse errors.
Request to Include ALCE 3624 on Education Checksheet

2 messages

Dawn Knight <dknight1@vt.edu>  Tue, Jul 28, 2020 at 4:19 PM
To: Donna Westfall-Rudd <mooredm@vt.edu>, "Rutherford, Tracy" <trutherford@vt.edu>
Cc: Nancy Bodenhorn <nanboden@vt.edu>

Hello Donna and Tracy,

I am writing for support from your department allowing us to include ALCE 3624 Communicating Agriculture & Life Sciences in Writing on our new Agricultural Education graduation checksheet.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Thank you!

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Rutherford, Tracy <trutherford@vt.edu>  Tue, Jul 28, 2020 at 4:28 PM
To: "Knight, Dawn" <dknight1@vt.edu>, "Westfall-Rudd, Donna" <mooredm@vt.edu>
Cc: "Bodenhorn, Nancy" <nanboden@vt.edu>

Yes, we approve use of ALCE 3524 on the AGED checksheet. I have attached the Spring 2020 syllabus.

TR

From: Dawn Knight <dknight1@vt.edu>
Date: Tuesday, July 28, 2020 at 4:20 PM
To: "Westfall-Rudd, Donna" <mooredm@vt.edu>, "Rutherford, Tracy" <trutherford@vt.edu>
Cc: "Bodenhorn, Nancy" <nanboden@vt.edu>
Subject: Request to Include ALCE 3624 on Education Checksheet
MEMORANDUM

TO: Dawn Knight-Withers,  
Pre-Education Advising Coordinator, Virginia Tech School of Education

FROM: Susan Sumner,  
Associate Dean and Director of Academic Programs

DATE: July 16, 2020

SUBJECT: ALS 1234 – CALS First Year Seminar

I am in support of including ALS 1234, CALS First Year Seminar, to the School of Education, Agricultural Education major checksheet. This will not require any new resources.
Hi, Dawn

My apologies. Things have been somewhat past crazy over here this summer. Thanks for following up.

We are okay with including APSC 1454 Introduction to Animal and Poultry Sciences on your Ag Ed checksheet as a required course. If you wish to include APSC 1464 Intro to APSC lab as an elective course, that is also fine. We just cannot guarantee seats in APSC 1464.

Good luck with the major. Please let me know if you need anything further from us.

Cindy

Dr. Cindy Wood
Associate Professor, Animal & Poultry Sciences
Co-Director, APSC Undergraduate Program
Virginia Tech
3020 Litton Reaves Hall
175 West Campus Drive
Blacksburg, VA 24061
piglady@vt.edu
540-231-6937

Join by Zoom: https://virginiatech.zoom.us/j/5402316937
Meeting ID: 540 231 6937
Business Courses on Education Checksheets

Russell, Robin <rrussell@vt.edu>
To: "Knight, Dawn" <dknight1@vt.edu>
Cc: "McCoy, Tracy" <tracym@vt.edu>

The BIT department approves the inclusion of BIT 2405 and BIT 4604 in the Career and Technical Education major. At the current numbers, no additional resources will be needed.

Roberta S. Russell
Professor and Head
Business Information Technology
Pamplin College of Business
Virginia Tech
540-231-6596 (office)
rrussell@vt.edu

From: Dawn Knight <dknight1@vt.edu>
Date: Friday, August 21, 2020 at 12:38 PM
To: Robin Russell <rrussell@vt.edu>
Cc: "Bodenhorn, Nancy" <nanboden@vt.edu>
Subject: Business Courses on Education Checksheets

Hello Dr. Russell,

I hope this finds you well and ready to jump into fall semester! After considering feedback from SCHEV, the Department of Education, and affected departments, we have made some adjustments to our program proposals. Thank you to everyone who shared their thoughts.

Today I am writing to ask your department's permission to include the courses listed below on the graduation checksheet for our proposed Career and Technical Education major. The content from these courses meets VDOE licensure competencies in Marketing Education and Business and Information Technology Education. We do not expect more than 8 or 10 students to choose these licensure options each year.

BIT 2405 Introduction to Business Statistics, Analytics, & Modeling
BIT 4604 Data Gov, Privacy, Ethics

Thank you for your time. I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions.
Hello Dr. Edwards,
I am currently putting together an undergraduate curriculum committee program proposal for a new Agricultural Education major and I was hoping to get written support from your department allowing us to include BSE 2094 Introduction to Metal Fabrication and BSE 2484 Engine and Power Train Technology on the graduation checksheet.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

---

Hi Dawn,

I'm happy to support, and I endorse inclusion of BSE 2094 and BSE 2484 on the Agricultural Education major graduation checksheet. I anticipate no additional resources will be required of BSE.

Best regards,

D. Edwards

Dwayne R. Edwards, Ph.D., P.E.
Professor and Department Head
Department of Biological Systems Engineering

200 Seitz Hall | 155 Ag Quad Lane | Blacksburg, VA 24061-0303
Phone: 540-231-1098 | Fax: 540-231-3199 | E-mail: dredwards@vt.edu
Website: https://www.bse.vt.edu/
Request to Include CHEM Courses on Education Checksheet
3 messages

Dawn Knight <dknight1@vt.edu>
To: Patricia Amateis <pamateis@vt.edu>
Cc: Nancy Bodenhorn <nanboden@vt.edu>

Hello Dr. Amateis,
Thank you for your recent note allowing us to include CHEMs 1015/1025/1016/1026 as Pathways options for our new Agricultural Education major. We have recently added ENSC 3604 which includes CHEM 1035 as a possible prerequisite, so we are hoping to include CHEM 1035 General Chemistry on the graduation checksheet as an additional option. As a reminder, we are expecting 10-15 students per academic year and this course would be one of several options.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Thank you, again!

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Patricia Amateis <pamateis@vt.edu>
To: Dawn Knight <dknight1@vt.edu>

Hi Dawn,

The Chemistry Department supports the inclusion of CHEM 1035 General Chemistry as an option on the graduation checksheet for the new Agricultural Education major.

Patricia Amateis
Director of Undergraduate Education
Chemistry

Dawn Knight <dknight1@vt.edu>
To: Patricia Amateis <pamateis@vt.edu>

Thank you very much!
Dawn: I did see it and thought I had sent the response, but it was in the draft folder. The text is below:

Dawn: We support inclusion of COMM 1015 and 1016 (Communication Skills) and CMST 3214 (Professional Communication) on the proposed Marketing Education major checksheet. Our current capacity for additional students in these courses is limited. We are working to expand that capacity, but with current hiring limits, I’m not sure how soon we might add instructors for these Pathways sections.

We support inclusion of CMST 4214 (Web Content Management Strategies) on the proposed Business and Information Technology Education major checksheet.
Hello Dr. Denton,
I am currently putting together program proposals for Career and Technical Education which includes 4 majors. I was hoping to get written support from your department allowing us to include COMM 2004 as Pathways on graduation checksheets for three of them; Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

Thank you!

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Douglas F. Cannon, Ph.D., APR+M, Fellow PRSA
Assistant Head, Department of Communication
Virginia Polytechnic Institute and State University (Virginia Tech)
OK, thank you for the clarification. At that expected enrollment, the Department of Computer Science approves the inclusion of CS 1054, CS 1044, CS 1114, and CS 1064 (if you decide to add it) in the checksheet for your new Mathematics Education major. Let me know if you need anything else.

-- Steve
CSES Courses on Education Checksheet

2 messages

Dawn Knight <dknight1@vt.edu>  
To: bftracy@vt.edu  
Cc: Nancy Bodenhorn <nanboden@vt.edu>, "Dr. Joseph Mukuni" <mjoseph7@vt.edu>

Hello Dr. Tracy,
I am currently putting together an undergraduate curriculum committee program proposal for a new Agricultural Education major and I was hoping to get written support from your department allowing us to include CSES 3114 Soils and CSES 3124 Soils Laboratory on the graduation checksheet.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

--

Dawn Knight-Withers, MAEd

Pre-Education Advising Coordinator, Virginia Tech School of Education

Benjamin F. Tracy <bftracy@vt.edu>

To: Dawn Knight <dknight1@vt.edu>
Cc: Nancy Bodenhorn <nanboden@vt.edu>, "Dr. Joseph Mukuni" <mjoseph7@vt.edu>

Hi Dawn -yes, we agree to allow CSES 3114 and 3124 on your checksheet for the new Agriculture Education major.

Regards,

Ben Tracy

--

Benjamin F. Tracy, PhD
Associate Director of Undergraduate Programs
School of Plant and Environmental Sciences - Virginia Tech
185 Ag. Quad Lane (MC 0404)
Blacksburg, Va 24061
Email: bftracy@vt.edu
Office Ph: 540.231.8259
CSES Courses on Education Checksheet

Benjamin F. Tracy <bftracy@vt.edu>  
To: Dawn Knight <dknight1@vt.edu>  
Mon, Aug 17, 2020 at 5:42 PM

Sure - that is actually my course. Was kind of wondering why it was included with the others. Thanks!

On Mon, Aug 17, 2020 at 5:29 PM Dawn Knight <dknight1@vt.edu> wrote:

Hello Dr. Tracy,

My apologies, it looks like I missed a CSES course the first time I asked. Could we also include CSES 2444 Agronomic Crops on our proposed checksheet for Agricultural Education majors?

Thank you!

On Thu, Jul 16, 2020 at 7:53 AM Benjamin F. Tracy <bftracy@vt.edu> wrote:

Hi Dawn -yes, we agree to allow CSES 3114 and 3124 on your checksheet for the new Agriculture Education major.

Regards,
Ben Tracy

On Wed, Jul 15, 2020 at 1:45 PM Dawn Knight <dknight1@vt.edu> wrote:

Hello Dr. Tracy,

I am currently putting together an undergraduate curriculum committee program proposal for a new Agricultural Education major and I was hoping to get written support from your department allowing us to include CSES 3114 Soils and CSES 3124 Soils Laboratory on the graduation checksheet.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

--

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

404 Wallace Hall (0565)
(540)231-6496 dknight1@vt.edu
Doctoral Candidate: Curriculum and Instruction
NACADA Advising Community Chair: Education Majors
Faculty Adviser: VT Chapters of KDP, SVEA, and AEYC

--

Benjamin F. Tracy, PhD
Associate Director of Undergraduate Programs
School of Plant and Environmental Sciences - Virginia Tech
ECON courses on Education Checksheets
3 messages

Dawn Knight <dknight1@vt.edu>  
To: Melanie Fox <melaniefox@vt.edu>  
Cc: Nancy Bodenhorn <nanboden@vt.edu>, "Dr. Joseph Mukuni" <mjoseph7@vt.edu>  

Hello Dr. Fox,  
I am currently putting together undergraduate curriculum committee proposals for Career and Technical Education which includes multiple new majors. I was hoping to get written support from your department allowing us to include ECON 2005 and 2006 as Pathways on graduation checksheets for Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. I am told that if you are willing to agree, an email response to that effect is sufficient. 

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction? 

Thank you!  
--  
Dawn Knight-Withers, MAEd  
Pre-Education Advising Coordinator, Virginia Tech School of Education

Melanie Fox <melaniefox@vt.edu>  
To: Dawn Knight <dknight1@vt.edu>  
Cc: Nancy Bodenhorn <nanboden@vt.edu>, "Dr. Joseph Mukuni" <mjoseph7@vt.edu>  

Hi Dawn, 
Yes, the department supports adding Econ 2005 and 2006 to these checksheets. 
Melanie Fox  
Director of Undergraduate Studies, Economics  
melaniefox@vt.edu

Ut Prosim
List of ELA and Elementary courses and new ELAEd Checksheet

Joe Eska <eska@vt.edu>
To: Dawn Knight <dknight1@vt.edu>

Fri, Jan 24, 2020 at 2:09 PM

Hello Dawn,

  This all is fine from the perspective of English. Please go ahead. We had spoken about trying to direct the Education majors to more of the linguistics courses, perhaps recommending that students enroll in the Pathways minor in Language Sciences. Have you decided against that?

Thanks,

Joe

On Thu, Jan 23, 2020 at 3:34 PM Dawn Knight <dknight1@vt.edu> wrote:

Hi Dr. Eska,

  I am worried that my last email must have been lost in the excitement of the end of fall semester. It is getting close to our deadline for submitting our degree proposals so I am reaching out for English department approval to include specific courses on our checksheets for Secondary English Education and Elementary Education. Below is the list of courses we discussed at our meeting in November. I made the suggested changes to the proposed checksheets and I have attached them. I am also told that an email reply is sufficient to submit. Thank you so much.

Secondary English
Pathways:
  ENGL 1105  First-Year Writing
  ENGL 1106  First-Year Writing
  ENGL 2744 Intro to Creative Writing
  ENGL/WGS 3134 Gender and Linguistics
  ENGL/RLCL/SOC 3144 Language and Ethnicity in the US
  ENGL 4164 Shakespeare

Major Requirements:
  ENGL 2604 Introduction to Critical Reading
  ENGL 2534 American Literary History
  ENGL 2544 British Literary History
  ENGL 3324 Acts of Interpretation
  ENGL 3514 Ethnic Literature for Children
  ENGL 3694 Topics in World Novels
  ENGL 3734 Community Writing
  ENGL 4164 Shakespeare

Restricted Electives (select from these choices):
  ENGL 3315 Playwriting
  ENGL 3714 Creative Writing: Poetry
  ENGL 3764 Technical Writing
  ENGL 3704 Creative Writing: Fiction
  ENGL 3724 Creative Writing: Creative Non-Fiction
  ENGL 3804 Technical Editing and Style
  ENGL/AFST 2644 Intro to African Amer. Literature
  ENGL 3364 Topics in Literature by Women
  ENGL 3624 Appalachian Literature
  ENGL/AINS 2804 Contemporary Native American Literature
  ENGL 3514 Ethnic Literature for Children
  ENGL 3654 Ethnic American Literature

Elementary Education, we are asking for the following courses to be included as Pathways requirements.
  ENGL 1105 First-Year Writing
  ENGL 1106 First-Year Writing

On Thu, Dec 5, 2019 at 1:41 PM Dawn Knight <dknight1@vt.edu> wrote:

  Hi Dr Eska,
Hi Laura,

I am currently putting together program proposals for Career and Technical Education which includes 4 majors: Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. I was hoping to get written support from your department allowing us to include ENGL 1105 and 1106 as Pathways on our graduation checksheets.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

Thank you!

--

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Hi Dawn,

Yes, please do go ahead and list ENGL1105 and ENGL1106 on your check sheets. Both classes are approved for Pathways Discourse. If you would like to have any additional information about those courses (e.g., curriculum maps or sample syllabi), let me know, and I will provide them.

All the best,

Derek
Re: English Courses on Education Checksheets

Jennifer Sano-Franchini <sanojenn@vt.edu>

To: Dawn Knight <dknight1@vt.edu>

Fri, Jul 31, 2020 at 5:29 PM

Hi Dawn,

In that case yes, please feel free to list Writing and Digital Media on the Business and Information Technology Education major checksheet.

All the best,
Jennifer

On Fri, Jul 31, 2020 at 11:47 AM Dawn Knight <dknight1@vt.edu> wrote:

Of course,
We expect between 5 and 10 students per year at most. We currently have only 1 or 2 come into the grad program. We hope offering it at the undergrad level will increase interest but it will not be huge numbers.

On Fri, Jul 31, 2020 at 10:57 AM Jennifer Sano-Franchini <sanojenn@vt.edu> wrote:

Thanks, Derek, for looping me in.

Dawn, do you know how many students are in the major and about how many would be taking Writing and Digital Media each term? Would it be a required course? Just want to make sure we have enough sections available and folks to teach them.

All the best,
Jen

On Thu, Jul 30, 2020 at 2:50 PM Derek Mueller <dmueller@vt.edu> wrote:

Hi Dawn,

I'm not the best person for addressing the check sheet status of that particular class, since it is a course in the department's core and also in the Professional and Technical Writing Program, which Jen Sano-Franchini directs. I've cc'd her on this message so she can confirm our interest in having that class listed for Business and Information Technology Majors.

All the best,
Derek

On Thu, Jul 30, 2020 at 2:45 PM Dawn Knight <dknight1@vt.edu> wrote:

Thank you.
Are you also the person to ask about ENGL 3844 Writing and Digital Media? It appears to be a good match for our Business and Information Technology Education majors.

On Thu, Jul 30, 2020 at 1:06 PM Derek Mueller <dmueller@vt.edu> wrote:

Hi Dawn,

Yes, we are in support of having ENGL1105 and ENGL1106 listed on the Mathematics Education advising/graduation checksheets.

All the best,
Derek

On Thu, Jul 30, 2020 at 12:14 PM Dawn Knight <dknight1@vt.edu> wrote:

Hi Derek,
Hello Dr. Tracy,

Thank you for the recent note allowing us to include CSES courses on our new Agricultural Education graduation checksheet. We have received some feedback about the content required by VDOE to approve our licensure program and I am reaching out to ask for support for additional courses within your department.

I am hoping to get written support from your department allowing us to include the following:

- HORT 2164 Floral Design
- HORT 2224 Horticulture Science and Industry
- ENSC 1015 Foundations of Environmental Science
- ENSC 3604 Fundamentals of Environmental Science

I am told that if you are willing to agree, an email response to that effect is sufficient.

Also, in order to be an approved educator preparation program, we are required to submit documentation to the VDOE. Based on the catalog descriptions, I believe these courses would benefit our students so I am also requesting recent syllabi to document the content covered.

Thank you!

--

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

---

Benjamin F. Tracy <bftracy@vt.edu>
To: Dawn Knight <dknight1@vt.edu>
Cc: Nancy Bodenhorn <nanboden@vt.edu>

Yes, I agree to the inclusion of these courses in the proposed curriculum. Let me know if you need anything else.

Thanks!

[Quoted text hidden]
Hello Dr. Singal,

I am currently putting together an undergraduate curriculum committee program proposal for a new Business and Information Technology Education major and I was hoping to get written support from your department allowing us to include FIN 3054 Legal and Ethical Environment of Business and FIN 3124: Financial Planning for Professionals on the graduation checksheet.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

---

Hello Dawn:

Yes, the Finance department will allow students from the new major to take FIN 3054 and FIN 3124. No additional resources are required. However, I hope you are aware that the major, Business and Information Technology, already exists in the Pamplin College of Business. I don't know whether adding "Education" is sufficiently distinctive.

Vijay

Vijay Singal
Department Head of Finance and J Gray Professor of Finance
Virginia Tech, vs@vt.edu
540-231-7750 (d), 540-231-5904 (o), 540-818-4089 (c)
FIN Courses on Education Checksheets

**Vijay Singal <singal@vt.edu>**

To: Dawn Knight <dknight1@vt.edu>  Thu, Aug 6, 2020 at 10:25 PM

Dawn:

The Finance department has no objection to your adding FIN 2114 as a course for the BIT Education checksheet. No additional resources are needed. Please note that this course is also a Pathways 5f course (CLE Area 5).

Vijay

Vijay Singal
Department Head of Finance and J Gray Professor of Finance
Virginia Tech, vs@vt.edu
540-231-7750 (d), 540-231-5904 (o), 540-818-4089 (c)
FREC Courses on Education Checksheets

Jay Sullivan <jsulliv@vt.edu>  
Fri, Jul 24, 2020 at 9:17 AM

To: "Bodenhorn, Nancy" <nanboden@vt.edu>  
Cc: "Williams, Mary"<masmith5@vt.edu>, "Knight, Dawn"<dknight1@vt.edu>, Melissa Cumbia <mlchen@vt.edu>

Nancy,

We are happy to have FREC 2004 Forest Ecosystems included on the Ag Education major checksheet. However, we are unwilling to allow FREC 3004 Environmental Informatics to be included, because it is a major cohort course for our Environmental Informatics major, and we believe having more than a small number of other majors who are not wholly invested in the topic would be disruptive to the aims of the course. Also, we are seeking to add prerequisites to the course, to make sure the students have sufficient background in calculus and data analysis needed to be successful in this course. We don't believe that the course would be suitable for Ag Education students going forward.

I'm sorry for the delay, as I sought input from our faculty involved in these courses and our majors.

Jay

Jay Sullivan  
Professor and Department Head  
Department of Forest Resources and Environmental Conservation  
College of Natural Resources and Environment  
Virginia Tech  
jsulliv@vt.edu, 540-231-4356

[Quoted text hidden]
Hello Dr. Sullivan,
Thank you for the recent note allowing us to include FREC 2004 on our new Agricultural Education graduation checksheet. Also for the heads up about FREC 3004 not being appropriate for our program. Based on further exploration, I believe these courses would better meet our needs.

FREC 1004 Digital Planet
FREC 2554 Leading Global Sustainability

I am told that if you are willing to provide written support for these, an email response to that effect is sufficient.

Thanks again!

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

404 Wallace Hall (0565)
(540)231-6496 dknight1@vt.edu
Doctoral Candidate: Curriculum and Instruction
NACADA Advising Community Chair: Education Majors
Faculty Adviser: VT Chapters of KDP, SVEA, and AEYC

Jay Sullivan
Professor and Department Head
Department of Forest Resources and Environmental Conservation
College of Natural Resources and Environment
Virginia Tech
jsulliv@vt.edu, 540-231-4356

[Quoted text hidden]
Dawn Knight <dknight1@vt.edu>

Updated: Geography Courses on History and Social Sciences Education proposed Checksheet

2 messages

Dawn Knight <dknight1@vt.edu>                        Thu, Jul 23, 2020 at 10:14 PM
To: "Crawford, Tom" <tomc3@vt.edu>
Cc: Nancy Bodenhorn <nanboden@vt.edu>, David Hicks <hicks@vt.edu>

Hello Dr. Crawford,

I apologize for having to ask you to do this a second time, however, while we were completing our curriculum matrices for the VDOE, we realized there were changes to the competencies for certain teacher licensure areas. Dr. Hicks has made changes to the checksheet to cover the new competencies and I am writing to ask for a new letter of support allowing us to list courses from your department on our graduation checksheet for the History and Social Sciences Education major.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Pathways and Restricted Electives

- GEOG 1014 World Regions (as Pathways)
- GEOG 1084 (FREC 1004): Digital Planet (as Pathways)
- GEOG 1104 Introduction to Physical Geography
- GEOG 1004 Introduction to Human Geography
- GEOG 2314: Maps and Mapping

Please let me know if you have any questions and, as always, thank you for your time.

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Crawford, Tom <tomc3@vt.edu>

Tue, Jul 28, 2020 at 4:11PM
To: "Knight, Dawn" <dknight1@vt.edu>
Cc: "Bodenhorn, Nancy" <nanboden@vt.edu>, "Hicks, David" <hicks@vt.edu>

Dawn,

With this email I am stating my support for inclusion of Geography courses in your proposed checksheet stated in your email below.

Sincerely,

Tom Crawford

Tom Crawford, PhD
Department Chair & Professor
Department of Geography

(540) 231-7216 | tomc3@vt.edu
Request to include course on History and Social Sciences Education Checksheet

2 messages

Dawn Knight <dknight1@vt.edu>    Thu, Aug 6, 2020 at 8:47 PM
To: "Crawford, Tom" <tomc3@vt.edu>
Cc: Nancy Bodenhorn <nanboden@vt.edu>, David Hicks <hicks@vt.edu>

Hello Dr. Crawford,
Thank you for the email supporting our inclusion of other GEOG courses. As you know, I am putting together a program proposal for a new undergraduate History and Social Sciences Education major and I am now requesting written support allowing us to include PSCI/GEOG/IS 2064: The Global Economy and World as a Pathways course on our graduation checksheet.

Because the course is cross-listed, folks in PSCI have suggested that I verify with you, as well. I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions and thank you for your time.

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Crawford, Tom <tomc3@vt.edu>    Thu, Aug 6, 2020 at 10:00 PM
To: "Knight, Dawn" <dknight1@vt.edu>
Cc: "Bodenhorn, Nancy" <nanboden@vt.edu>, "Hicks, David" <hicks@vt.edu>

Dawn,

With this email I agree to include the course GEOG 2064 The Global Economy and World in your proposed major. This course is not taught by a Geography faculty but is crosslisted under the GEOG prefix.

Sincerely,

Tom Crawford

Tom Crawford, PhD
Department Chair & Professor
Department of Geography
Hello Dr. Shadle,

I apologize for having to ask you to do this a second time, however, while we were completing our curriculum matrices for the VDOE, we realized there were changes to the competencies for certain teacher licensure areas. Dr. Hicks has made changes to the checksheet to cover the new competencies and I am writing to ask for a new letter of support allowing us to list courses from your department on our graduation checksheet for the History and Social Sciences Education major.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Pathways and Restricted Electives

- HIST 1115 History of the United States (as Pathways)
- HIST 1116 History of the United States (as Pathways)
- HIST 2004 Historical Methods (or PSCI 2024)
- HIST 3205 or 3206 History of US South or HIST 3224 History of Virginia
- HIST 1215 Intro to World History
- HIST 1216 Intro to World History
- HIST 3114 History of Capitalism (or PSCI 2064)

Depth Electives (students will select two)

- HIST 2275/2276 African-American History
- HIST 3144: American Environmental History
- HIST 3564: The Cold War
- HIST 1515 or 1516 History of Africa I or II
- HIST 2104 Topics and Critical Issues in U.S. History
- HIST 2114 Topics Critical Issues in European History
- HIST 2124 Topics Critical Issues in World History
- HIST 2345 History of the Middle East
- HIST 2355 History of China
- HIST 2364 History of Japan
- HIST 2384 Gandhi and Modern India
- HIST 2715 History of Technology
- HIST 3004 Colonial America
- HIST 3014 The American Revolution
- HIST 3054 American Civil War
- HIST 3064 Emergence of Modern America
- HIST 3084 Recent America
- HIST 3234 The North American West
- HIST 3304 The World of Alexander the Great
- HIST 3334 The Renaissance
- HIST 3344 The Era of Reformation
- HIST 3364 Age of Revolution and Napoleon
- HIST 3544 World War I
- HIST 3554 Age of Globalization
- HIST 3714 War and Medicine
- HIST 3774 Digital History

Please let me know if you have any questions and, as always, thank you for your time.

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Brett Shadle <shadle@vt.edu> 
To: Dawn Knight <dknight1@vt.edu> 
Cc: David Hicks <chicks@vt.edu>, Nancy Bodenhorn <nanboden@vt.edu>, Heath Furrow <hafurrow@vt.edu> 
Thu, Jul 30, 2020 at 2:09 PM

Hi Dawn,

History is fine with you listing these courses on the checksheet.

Thanks

Brett
Request to Include HIST course on FCS Checksheet

2 messages

Dawn Knight <dknight1@vt.edu>  Thu, Jul 30, 2020 at 4:36 PM
To: Brett Shadle <shadle@vt.edu>

Hi Brett,
Me again :). The School of Education would like to include HIST 2604 Intro Data in Social Context as a Pathways course for Family and Consumer Sciences Education majors. We expect fewer than 10 students per year, and this would be one of three options for concept 5f.
Thank you.

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Brett Shadle <shadle@vt.edu>  Fri, Jul 31, 2020 at 8:23 AM
To: Dawn Knight <dknight1@vt.edu>, Dennis Halpin <dphalpin@vt.edu>, Heath Furrow <hafurrow@vt.edu>

Hi Dawn,

The History Department is fine with 2604 being added to the checksheet.

Thanks
Brett

Brett L. Shadle
Professor and Chair
Department of History
Core faculty ASPECT
431 Major Williams (0117)
Virginia Tech*
Blacksburg VA 24061
*Tutelo/Monacan people are the traditional custodians of this land
Renee and Nancy,

Thanks for including me in this email trail. As an FYI, CLAHS has informed our department that we have to continue admitting students to the FCS program for the remainder of this year until it can be formally taken off the books. We will then implement a wrap-up plan for the enrolled students, which shouldn't be hard because none of the classes we offer in that program are going away. We are in full support of your program and will be happy to do anything we can to help through this period of transition.

Best,
Dustin

On Thu, Aug 20, 2020 at 3:10 PM Eaton, Renee <rselberg@vt.edu> wrote:

Hi Nancy,

At the HNFE Faculty meeting today, the vote passed to include HNFE 1004 on the checksheet for the new Family and Consumer Sciences Education program. Please accept this email as our support for this program.

Renee

Renee S. Eaton, MS, MS, LAT
Undergraduate Program Director and Advanced Instructor
Human Nutrition, Foods and Exercise
295 West Campus Drive
Blacksburg VA 24061
540.231.5987 r.eaton@vt.edu
Hello Dr. McGehee,

I am putting together undergraduate curriculum committee program proposals for new Education majors and I was hoping to get written support from your department allowing us to include courses on our graduation checksheets. Currently we are submitting proposals for Career and Technical Education which includes four proposed majors: Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. The following have requested permission to include courses from your department on graduation checksheets.

I am told that if you are willing to agree, an email reply to that effect is sufficient.

Agricultural Education
HTM 3424 Events Management (as Pathways Requirement)

Business and Information Technology Education
HTM 3424 Events Management (as Pathways Requirement)

Family and Consumer Sciences Education
HTM 3414 Food Preparation, Purchasing and Management

Marketing Education
HTM 3424 Events Management (as Pathways Requirement)

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction? Thank you for your time.

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

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McGehee, Nancy <nmcghee@vt.edu>
Fri, Jul 17, 2020 at 12:35 PM

To: "Knight, Dawn" <dknight1@vt.edu>
Cc: "Bodenhorn, Nancy" <nanboden@vt.edu>, "Mukuni, Joseph" <mjoseph7@vt.edu>

Thanks for your patience, Dawn,

Yes, I approve and agree with this change.

Nancy

Nancy G McGehee
Professor and Head
Howard Feiertag Department of Hospitality and Tourism Management
Pamplin College of Business
Hello Dawn,

I approve.

Nancy

---

Hello again Dr. McGehee,
We have been revising our proposals based on feedback and would like to add HTM 2314 Introduction to International Business to our BIT Education checksheet.

Thank you for your time,

Dawn

On Fri, Jul 17, 2020 at 12:35 PM McGehee, Nancy <nmctime@vt.edu> wrote:

Thanks for your patience, Dawn,

Yes, I approve and agree with this change.

Nancy

Nancy G McGehee
Professor and Head
Howard Feiertag Department of Hospitality and Tourism Management
Pamplin College of Business
540 231 1201
Hi Nancy,

The courses will be required, but these are anticipated to be the same students who currently take these as prerequisites to our graduate program. We are shifting the licensure program to an undergraduate model and anticipate roughly 10-15 per year.

On Wed, Jul 15, 2020 at 6:00 PM McGehee, Nancy <nmcgehee@vt.edu> wrote:

Hello Dawn–

Thanks for reaching out. Can you provide some additional information? Are these courses going to be required or would they be part of a suite of options? About how many students would we expect to take on?

Thanks much,

Nancy

Hello Dr. McGehee,

I am putting together undergraduate curriculum committee program proposals for new Education majors and I was hoping to get written support from your department allowing us to include courses on our graduation checksheets. Currently we are submitting proposals for Career and Technical Education which includes four proposed majors; Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. The following have requested permission to include courses from your department on graduation checksheets.
August 11, 2020

Nancy Bodenhorn
Associate Director, Office of Academic Programs
Associate Professor, Counselor Education
404 Wallace Hall
School of Education
Virginia Tech

Dear Professor Bordenhorn:

The Department of Mathematics supports the School of Education proposals for Secondary Math Education as well as Career and Technical Education which includes four majors; Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. The following MATH courses are included:

**Secondary Mathematics Education**
- MATH 1225 Calculus of a Single Variable (as Pathways)
- MATH 1226 Calculus of a Single Variable (as Pathways)
- MATH 3054 Programming for Mathematical Problem Solving (1 of 4 options for Computer Programming)
- MATH 1004 Discovering Mathematics I
- MATH 1044 Discovering Mathematics II
- MATH 2114 Introduction to Linear Algebra
- MATH 2204 Introduction to Multivariable Calculus
- MATH 3034 Introduction to Proofs
- MATH 3124 Modern Algebra MATH
- 4044 History of Mathematics MATH
- 4334 College Geometry
- MATH 4625 Mathematics for Secondary Teachers
- MATH 4626 Mathematics for Secondary Teachers
- MATH 3224: Advanced Calculus

**Career and Technical Education (Business and Information Technology and Marketing)**
- MATH 1524 Business Calculus (as Pathways and pre-req)

We expect to be able to teach these courses with no new recourses.

Best regards,

Robert C. Rogers
Professor and Associate Chair
Dawn Knight <dknight1@vt.edu>  

MGT Courses on Education Checksheets  
5 messages  

Dawn Knight <dknight1@vt.edu>  
To: devi@vt.edu  
Cc: Nancy Bodenhorn <nanboden@vt.edu>, "Dr. Joseph Mukuni" <mjoseph7@vt.edu>  

Hello Dr. Gnyawali,  
I am putting together undergraduate curriculum committee program proposals for new Education majors and I was hoping to get written support from your  
department allowing us to include courses on our graduation checksheets. Currently we are submitting proposals for Career and Technical Education  
which includes four proposed majors; Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences  
Education, and Marketing Education. The following have requested permission to include courses from your department on graduation checksheets.  

I am told that if you are willing to agree, an email reply to that effect is sufficient.  

Business and Information Technology Education  
  MGT 3444 Multicultural Diversity in Organizations (as Pathways Requirement)  
  MGT 3304 Management Theory and Leadership Practice  

Family and Consumer Sciences Education  
  MGT 3444 Multicultural Diversity in Organizations (as Pathways Requirement)  

Marketing Education  
  MGT 3444 Multicultural Diversity in Organizations (as Pathways Requirement)  

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction? Thank you for  
your time.  

--  
Dawn Knight-Withers, MAEd  
Pre-Education Advising Coordinator, Virginia Tech School of Education  

Gnyawali, Devi <devi@vt.edu>  
Fri, Jul 17, 2020 at 12:27 PM  
To: "Knight, Dawn" <dknight1@vt.edu>  
Cc: Bodenhorn, Nancy <nanboden@vt.edu>, "Mukuni, Joseph" <mjoseph7@vt.edu>  

Thank you for the explanation. With the expected enrollments you noted, you have my approval to include MGT 3444 in the checksheets.  

Devi  

From: Dawn Knight <dknight1@vt.edu>  
Sent: Friday, July 17, 2020 10:30 AM  
To: Gnyawali, Devi <devi@vt.edu>  
Cc: Bodenhorn, Nancy <nanboden@vt.edu>; Mukuni, Joseph <mjoseph7@vt.edu>  
Subject: Re: MGT Courses on Education Checksheets  

Only three of the four have requested MGT 3444 as a Pathways requirement, and combined I would expect those to include fewer than 10-15 students  
per year based on current numbers. Of the four CTE majors, Ag Ed is the largest and they utilize a different diversity-focused course.
On Thu, Jul 16, 2020 at 5:58 PM Gnyawali, Devi <devi@vt.edu> wrote:

Please let me know expected enrollments in each of the four proposed majors. Do you really want/need the same course for all?

Best regards

Devi R. Gnyawali, Ph.D.
Department Head and R. B. Pamplin Professor
Department of Management (mail code 0233), 2007 Pamplin Hall
880 West Campus Drive, Blacksburg, VA 24061
Email: devi@vt.edu
Phone: 540-231-6353
https://management.pamplin.vt.edu/directory/gnyawali-devi.html

Dawn Knight <dknight1@vt.edu> Fri, Jul 17, 2020 at 12:34 PM
To: "Gnyawali, Devi" <devi@vt.edu>
Cc: "Bodenhorn, Nancy" <nanboden@vt.edu>, "Mukuni, Joseph" <mjoseph7@vt.edu>

Thank you! And also MGT 3304 Management Theory and Leadership Practice only for the BIT majors (5-ish per year)?

Gnyawali, Devi <devi@vt.edu> Fri, Jul 17, 2020 at 12:48 PM
To: "Knight, Dawn" <dknight1@vt.edu>

Sure, that will be fine. We have capacity in MGT 3304

Best regards

Devi

Devi R. Gnyawali, Ph.D.
Department Head and R.B. Pamplin Professor of Management
2007 Pamplin Hall, Department of Management, Virginia Tech

On Jul 17, 2020, at 12:35 PM, Dawn Knight <dknight1@vt.edu> wrote:

Dawn Knight <dknight1@vt.edu> Fri, Jul 17, 2020 at 12:57 PM
To: "Gnyawali, Devi" <devi@vt.edu>

Great, thanks!

MGT Courses on Education Checksheets

Gnyawali, Devi <devi@vt.edu>

To: "Knight, Dawn" <dknight1@vt.edu>

Mon, Aug 10, 2020 at 5:44 PM

Sure, you have my approval to include MGT 3304 to the checksheet.

Thank you

Devi

From: Dawn Knight <dknight1@vt.edu>
Sent: Monday, August 10, 2020 5:30 PM
To: Gnyawali, Devi <devi@vt.edu>
Subject: Re: MGT Courses on Education Checksheets

Hello Again Dr. Gnyawali,

It appears as though the Marketing Education majors could also benefit from the course MGT 3304 Management Theory and Leadership Practice. We do not expect more than 3 or 4 students to choose this option. Would it be OK to add this course to our Marketing Education checklist as well?

On Jul 17, 2020, at 12:48 PM Gnyawali, Devi <devi@vt.edu> wrote:

Sure, that will be fine. We have capacity in MGT 3304

Best regards

Devi

Devi R. Gnyawali, Ph.D.

Department Head and R.B. Pamplin Professor of Management

2007 Pamplin Hall, Department of Management, Virginia Tech

On Jul 17, 2020, at 12:35 PM, Dawn Knight <dknight1@vt.edu> wrote:
Hi Dawn,

You have my permission to include MGT 2064 to the list. At this point I cannot allow inclusion of MGT 1104 due to capacity constraints. Thank you

Devi

---

From: Dawn Knight <dknight1@vt.edu>
Sent: Thursday, August 6, 2020 9:36 PM
To: Gnyawali, Devi <devi@vt.edu>
Subject: Re: MGT Courses on Education Checksheets

Hello again, Dr. Gnyawali,

We have been working on some feedback regarding our proposed majors and would like to ask for permission to also include MGT 1104 Foundations of Business and MGT 2064 Foundations Entrepreneurship on our Business and Information Technology Education majorchecksheet.

I would also like to ask if there is a contact in the School of Business who could provide some feedback on our Marketing Ed and BIT Ed proposals. We think it is important to work closely with the faculty who provide students with their content courses.

On Fri, Jul 17, 2020 at 12:34 PM Dawn Knight <dknight1@vt.edu> wrote:

Thank you! And also MGT 3304 Management Theory and Leadership Practice only for the BIT majors (5-ish per year)?

On Fri, Jul 17, 2020 at 12:27 PM Gnyawali, Devi <devi@vt.edu> wrote:

Thank you for the explanation. With the expected enrollments you noted, you have my approval to include MGT 3444 in the checksheets.

Devi
Hello Dr. Bagchi,

I am putting together undergraduate curriculum committee program proposals for new Education majors and I was hoping to get written support from your department allowing us to include courses on our graduation checksheets. Currently we are submitting proposals for Career and Technical Education which includes four proposed majors: Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. The following have requested permission to include courses from your department on graduation checksheets.

I am told that if you are willing to agree, an email reply to that effect is sufficient.

Marketing Education

- MKTG 3104 Marketing Management
- MKTG 3504 Principles of Advertising
- MKTG 4204 Consumer Behavior
- MKTG 4604 Retail Management
- MKTG 4554 Relationships Among Buyers & Sellers
- MKTG 4704 International Marketing
- MKTG 4774 Advanced Professional Selling

Business and Information Technology Education

- MKTG 3104 Marketing Management

Please let me know if you have any questions or, if this is someone else’s responsibility, could you please point me in the right direction? Thank you for your time.

--

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

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Bagchi, Rajesh <rbagchi@vt.edu>
To: "Knight, Dawn" <dknight1@vt.edu>
Cc: "Bodenhorn, Nancy" <nanboden@vt.edu>, "Mukuni, Joseph" <mjoseph7@vt.edu>, "Blankenship, Misty" <jeblanke@vt.edu>

Hello Dawn,

Yes, I approve this. Thank you.

Best regards,
Rajesh

[Quoted text hidden]
Request to include PHIL course on Family and Consumer Sciences Education Checksheet

2 messages

Dawn Knight <dknight1@vt.edu>  Thu, Jul 30, 2020 at 11:25 PM
To: jcpitt@vt.edu
Cc: Nancy Bodenhorn <nanboden@vt.edu>

Hello Dr. Pitt,
I am putting together a program proposal for a new undergraduate Family and Consumer Sciences Education major and I was hoping to get written support from the Department of Philosophy allowing us to include PHIL 2304 Global Ethics as a Pathways course on our graduation checksheet.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions and thank you for your time.

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Pitt, Joseph <jcpitt@vt.edu>  Fri, Jul 31, 2020 at 3:59 PM
To: "Knight, Dawn" <dknight1@vt.edu>

Hi Dawn,

I am delighted you want to include PHIL 2304 on your graduation check sheet for your new major. We certainly support it.

Best wishes,
Joe

**********************************************************************************

Joseph C. Pitt
Hi Dawn,

No questions, happy to support.

Joe

Joseph C. Pitt
Professor of Philosophy & STS
ASPECT Affiliate
Director of Undergraduate Studies
Department of Philosophy
Virginia Tech

Thank you, Dr. Pitt!

I have also been working on other Career and Technical Education majors and would appreciate support for the following: Business and Information Technology Education would like to include PHIL 2304 Global Ethics and Marketing Education would like to include PHIL 4324 Bus and Prof Ethics. Please let me know if you have any questions and thank you for your time.

On Fri, Jul 31, 2020 at 4:00 PM Pitt, Joseph <jcpitt@vt.edu> wrote:

Hi Dawn,

I am delighted you want to include PHIL 2304 on your graduation check sheet for your new major. We certainly support it.

Best wishes,
Joe
Updated: Political Science Courses on History and Social Sciences Education proposed Checksheet

3 messages

Dawn Knight<dknight1@vt.edu> Thu, Jul 23, 2020 at 10:14 PM
To: Timothy Luke <twluke@vt.edu>
Cc: David Hicks <hicks@vt.edu>, "Thomas, Courtney" <copowell@vt.edu>, Nancy Bodenhorn <nanboden@vt.edu>

Hello Dr. Luke,

I apologize for having to ask you to do this a second time, however, while we were completing our curriculum matrices for the VDOE, we realized there were changes to the competencies for certain teacher licensure areas. Dr. Hicks has made changes to the checksheet to cover the new competencies and I am writing to ask for a new letter of support allowing us to list courses from your department on our graduation checksheet for the History and Social Sciences Education major.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Pathways and Restricted Electives

- PSCI/ECON/PHIL 2894 Introduction Philosophy, Politics, and Economics (as Pathways)
- PSCI/GEOG/IS 2064: The Global Economy and World (as Pathways)
- PSCI 1014 Intro to US Government and Politics (as Pathways)
- PSCI 2024 Research Methods in Political Science (or HIST 2004)

Depth Electives (students will select two)

- PSCI/IS 1024 Introduction to Comparative Government and Politics
- PSCI 3424 State and Local Government
- PSCI 3334 Judicial Process
- PSCI 2014 Introduction to Political Theory
- PSCI/PHIL 3015/3016 Political Theory

Please let me know if you have any questions and, as always, thank you for your time.

--

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

---

Timothy Luke<twluke@vt.edu> Thu, Aug 6, 2020 at 3:58 PM
To: Dawn Knight <dknight1@vt.edu>, Timothy Luke <twluke@vt.edu>

Dawn:

I believe that I responded last year in November and December. All of the IS and PSCI courses are acceptable for us to included in the your check sheets, but I believe you will need to get confirmations on the cross-listed courses from ECON, GEOG and PHIL.

Those courses are:

- PSCI/ECON/PHIL 2894 Introduction Philosophy, Politics, and Economics (as Pathways)
- PSCI/GEOG/IS 2064: The Global Economy and World (as Pathways)
- PSCI/PHIL 3015/3016 Political Theory

I agree that these IS and PSCI options would be good to include in your updated check sheets.
Best,

Tim Luke

On Thu, Aug 6, 2020 at 3:44 PM Dawn Knight <dknight1@vt.edu> wrote:

Hi Dr. Luke,
Did you receive my request? I can't find a reply.

Dawn Knight <dknight1@vt.edu> Thu, Aug 6, 2020 at 4:01 PM
To: Timothy Luke <twluke@vt.edu>

We made some changes so I needed an updated OK from you guys. Thank you so much, I appreciate it :)

[Quoted text hidden]
Hello Dawn,

I approve of the inclusion of PSYC 2034: Developmental Psychology as an option.

Take care, Roseanne

Roseanne J. Foti, Ph.D.
Chair, Department of Psychology
Virginia Tech
540.231.5814 (voice)
rfoti@vt.edu

Please note: due to my personal family/work balance, I often email outside of normal working hours. Do not feel any pressure to respond outside of your own working pattern.

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education
Hello again Dr. Gabriele,
I am putting together a program proposal for a new undergraduate Family and Consumer Sciences Education major and I was hoping to get written support from the Department of Religion and Culture allowing us to include RLCL/WGS/AFST 2204 Race & Gender in Religion & Culture as a Pathways course on our graduation checksheet.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions and thank you for your time.

--

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Matthew Gabriele
Professor of Medieval Studies
Chair, Dept. of Religion & Culture
Virginia Tech
e: gabriele@vt.edu
p: +1.540.231.1618
http://profgabriele.com/
http://drinkinghistorians.com/

[Quoted text hidden]
Request to include RLCL course on History and Social Sciences Education Checksheet

2 messages

Dawn Knight <dknight1@vt.edu>  Thu, Jul 23, 2020 at 10:14 PM
To: Matthew Gabriele <gabriele@vt.edu>
Cc: David Hicks <hicks@vt.edu>, Nancy Bodenhorn <nanboden@vt.edu>

Hello Dr. Gabriele,
I am putting together a program proposal for a new undergraduate History and Social Sciences Education major and I was hoping to get written support from the Department of Religion and Culture allowing us to include RLCL 1214: Medieval World as an elective on our graduation checksheet.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions and thank you for your time.

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Matthew Gabriele <gabriele@vt.edu>  Fri, Jul 24, 2020 at 8:24 AM
To: Dawn Knight <dknight1@vt.edu>
Cc: David Hicks <hicks@vt.edu>, Nancy Bodenhorn <nanboden@vt.edu>

Dawn,

Thanks for your email. The Department of Religion and Culture is happy to have RLCL 1214 included on this checksheet. It will require no new resources. Please let me know if you need anything else.

Best,
Matt Gabriele

--
Matthew Gabriele
Professor of Medieval Studies
Chair, Dept. of Religion & Culture
Virginia Tech
he/ him/ his
Request to Include SBIO Course on Education Checksheet

Dawn Knight <dknight1@vt.edu>  
To: garnandd@vt.edu  
Cc: Nancy Bodenhorn <nanboden@vt.edu>

Hello Debbie,

I am currently putting together an undergraduate curriculum committee program proposal for a new Agricultural Education major and I was hoping to get written support from your department allowing us to include SBIO 2614 Introduction to Forest Products Marketing on the graduation checksheet to cover required licensure content in the area of "Production and management of the forest." We are expecting 10-15 students per year to select this option.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Also, as an approved educator preparation program, we are required to submit documentation to the VDOE. Based on the catalog descriptions, I believe this course would benefit our students so I am also requesting recent syllabi to document the content covered.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

Thank you!

--
Dawn Knight-Withers, MAEd  
Pre-Education Advising Coordinator, Virginia Tech School of Education

Ching-Hsun May Huang, Ph.D.  
Department Head and Professor  
Department of Sustainable Biomaterials

Huang, Ching-Hsun <chinghuang@vt.edu>  
To: "Bush, Robert" <rbush@vt.edu>  
Cc: "Knight, Dawn" <dknight1@vt.edu>

Dear Dawn,

I am glad that Dr. Bush’s class will be included in the Agricultural Education curriculum. Students will definitely benefit from his knowledge and expertise. I approve this request and please let me know if there is a form I need to sign.

Thank you.

Best wishes,

Ching

Ching-Hsun May Huang, Ph.D.  
Department Head and Professor  
Department of Sustainable Biomaterials
Hello, Dawn.

If it is fewer than 10 students per year, we would enjoy having Family and Consumer Sciences Education majors in SOC 2104 and agree to it being included as an Pathways option for the major. The only issue for having more is that this course will be required of our majors beginning next year, so there will be high demand. Please let me know if you need anything further at this time. Good luck with your proposal.

Best,

Jim

James Hawdon
Professor
Interim Chair, Department of Sociology
Director, Center for Peace Studies and Violence Prevention
Virginia Tech
495 Old Turner St.
205a Norris Hall
Blacksburg, Virginia 24061

--
From: Dawn Knight [mailto:dknight1@vt.edu]
Sent: Tuesday, August 4, 2020 2:41 PM
To: Hawdon, James <hawdonj@vt.edu>
Cc: Bodenhorn, Nancy <nanboden@vt.edu>
Subject: Request to Include SOC course on FCS Checksheet

Hello Dr. Hawdon,

The School of Education would like to include SOC 2104 Quantitative Community Research as a Pathways course for Family and Consumer Sciences Education majors. We expect fewer than 10 students per year, and this would be one of two options for concept 5f.

I am told that if you are willing to agree, an email response to that effect is sufficient.
Please let me know if you have any questions or, if this is someone else's responsibility could you please point me in the right direction?

Thank you!

--

Dawn Knight-Withers, MAEd

Pre-Education Advising Coordinator, Virginia Tech School of Education
Permission to include SOC prerequisites on checksheet

Hawdon, James <hawdonj@vt.edu>
To: "Knight, Dawn" <dknight1@vt.edu>
Cc: "Bodenhorn, Nancy" <nanboden@vt.edu>

Fri, Oct 9, 2020 at 8:35 AM

Hello, Dawn.

The Department of Sociology is pleased to have SOC 1004 Introduction to Sociology and SOC 2014 Sociology of Intimate Relationships included on the Career and Technical Education Major, in the Family and Consumer Sciences Option. We understand these courses will be included on the checksheet, and no new resources will be needed to accommodate these new students. A

Best,

James Hawdon
Professor
Interim Chair, Department of Sociology
Director, Center for Peace Studies and Violence Prevention
Virginia Tech
495 Old Turner St.
205a Norris Hall
Blacksburg, Virginia 24061

From: Dawn Knight [mailto:dknight1@vt.edu]
Sent: Thursday, October 8, 2020 4:45 PM
To: Hawdon, James <hawdonj@vt.edu>
Cc: Bodenhorn, Nancy <nanboden@vt.edu>
Subject: Permission to include SOC prerequisites on checksheet

Hello Dr. Hawdon,

Thank you for allowing us to include SOC 3714 Sociology of Aging and SOC 4014 Sociology of the Family on our Career and Technical Education Major, Family and Consumer Sciences Option checksheet. The registrar has suggested that we also include the prerequisite courses, SOC 1004 Introduction to Sociology and SOC 2014 Sociology of Intimate Relationships.

Please reply to this email if that is acceptable.

Respectfully

--

Dawn Knight-Withers, MAEd
Hello, Dawn.

Sociology is happy to have SOC 3714 Sociology of Aging and SOC 4014 Sociology of the Family included in the Family and Consumer Sciences Education majors to meet VDOE competencies.

Thanks,

[Quoted text hidden]
Hi Nancy,

Thanks for the request. Yes, the Statistics Department supports including its courses in the graduation checksheets for the new majors. As things evolve, let me know if students are having difficulty getting into 2004.

Best,

Dave Higdon
Head, Department of Statistics

On Sat, Jul 25, 2020 at 3:01 PM Bodenhorn, Nancy <nanboden@vt.edu> wrote:

Hello David,

Currently, I am putting together program proposals to send to the Undergraduate Curriculum Committee for new Education majors and I was hoping to get written support from your department allowing us to include courses on our graduation checksheets. I am told that if you are willing to agree, an email response to that effect is sufficient.

Currently we are submitting proposals for Math Education as well as Career and Technical Education which includes 4 majors; Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education.

- **Secondary Mathematics Education** (10-15 students double major in Math, so probably not an addition)
- **STAT 3005**: Statistical Methods OR
- **STAT 3604**: Statistics for Social Science
  (as Pathways)

- **All Career and Technical Education Majors** (Ag Ed, BIT, FCS, and Marketing) (likely 20 – 25 students total)
- **STAT 2004**: Introductory Statistics (as Pathways)

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction? Thank you for your time.

Thank you so much!

Nancy
Hello Dr. Breslau,
I am currently putting together undergraduate curriculum committee proposals for Career and Technical Education which includes four new majors. I was hoping to get written support from your department allowing us to include STS 2254 Innovation in Context as Pathways on graduation checksheets for Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

Thank you!

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

---

Dear Dawn Knight,
The Department of Science, Technology, and Society approves of the inclusion of STS 2254 Innovation in Context on checksheets for Career and Technical Education majors in Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. Inclusion of the course in those programs will not require additional resources. Please let me know if I can be of further assistance.

Best wishes,
Daniel Breslau
Chair, STS Department
RESOLUTION TO ESTABLISH A
SCHOLARLY ARTICLES OPEN ACCESS POLICY

WHEREAS, Virginia Tech authors publish scholarly articles, typically in peer-reviewed journals, in order to advance knowledge in their field, and additionally for faculty, to meet the requirements of promotion and tenure, and

WHEREAS, the majority of those articles are not available to the public, because most scholarly publishers require authors to transfer copyright to them, and scholarly publishers then limit access to those articles, and

WHEREAS, the public includes scholars in low and middle income countries, government policymakers, non-governmental organizations, taxpayers, and Virginia Tech alumni, and

WHEREAS, authors do not benefit from the full dissemination of their work when access is limited, as many citation studies have shown, and

WHEREAS, the university is not fully meeting its mission as a public land-grant university, or as a global land-grant university, when access to its research is limited, and

WHEREAS, in 2016, Virginia Tech’s Commission on Research created the Open Access Policy Working Group to draft a policy to address these issues, while consulting with faculty, staff, and students across the university, and

WHEREAS, the working group made presentations about the attached policy to Virginia Tech’s Commission on Research, Commission on Faculty Affairs, and the Faculty Senate each year since 2017, as well as to multiple groups on campus; has consulted with University Legal Counsel; has created a policy website (http://bit.ly/vtoapolicy) with resources and frequently asked questions; has given more than 20 presentations, and issued a campus news article; and has addressed questions and concerns in person and by email,

NOW, THEREFORE BE IT RESOLVED, that Virginia Tech authors hereby grant a non-exclusive license to the university to enable it to legally share their scholarly articles via the institutional open access repository, and authors make a commitment to provide the accepted manuscripts of those articles for global dissemination, as detailed in the attached revision of Policy 13000.

RECOMMENDATION:
That the Board of Visitors approve this resolution to establish a scholarly articles open access policy.

March 22, 2021.
Policy on Intellectual Property

1.0 Purpose

Publicly (state) supported universities have the multiple missions of teaching, research, support of the public interest and fostering of economic development of the area/state in which they are located.

Scholarly activities in a University setting create Intellectual Properties (IPs). IPs include research papers, books, software programs, new inventions, journal articles, etc.

With regard to research data, results, and related materials for projects conducted at the university, under the auspices of the university, or with university resources, please refer to Policy 13015, “Ownership and Control of Research Results.”

The University’s mission includes dissemination of IPs in the most efficient and effective manner possible. The identification and optimization of opportunities for the industrial/commercial utilization of some IPs is also part of this mission, as is the protection of the ownership rights of both the individuals and the University.

While many IPs are best disseminated by publication and placing in the public domain, there are a significant number that are most effectively handled by protection under the IP laws (i.e., patenting and copyright) and licensing (or other transfer) to private sector entities, with attendant financial considerations.

This Policy is designed to establish the rationale and the mechanisms to:

1. Establish ownership criteria and resolve ownership questions if such arise.
2. Define the responsibilities, rights and privileges of those involved.
3. Develop basic guidelines for the administration of the IP Policy.

This Policy applies to all employees, students, and all other persons or entities using University resources pursuant to this policy.

2.0 Policy
2.1 Organization

The Intellectual Properties Committee (IPC) membership shall be as stated in the By-Laws of University Council.

2.2 Authority and Responsibility of the Committee

The IPC shall have the following authority and responsibility with respect to Intellectual Property:

A. To develop and recommend University policy and policy changes dealing with IP to the Commission on Research.

B. To review all disputed invention disclosures submitted by Virginia Tech faculty, staff and/or students for:
   1. Complete and appropriate disclosure of individuals involved in the invention and/or creation of the IP.
   2. Confirm the determination of IP ownership by University, originating individuals, research sponsors and/or governmental agencies.
   3. Examination and recommendation to the Executive Vice President and Provost for disposition of (1) and/or (2) above in those cases where a dispute remains.
   4. Coordination of evaluation and recommendation to Virginia Tech Intellectual Properties, Inc. (VTIP) of technical merit, economic potential and protection/marketing priority as needed.

C. To make recommendations to the Executive Vice President and Provost for the sharing of royalties between the University and the authors or inventor(s) of the IPs owned by the University.

D. To promulgate such guidelines and procedures as may be necessary for the implementation of this Policy.

Much of the work of the IPC as defined above will be addressed through the normal business of the full committee. However, it may be prudent in the review of certain disputed invention disclosures to have a subgroup of the entire IPC to more fully consider all necessary aspects of the dispute. This shall be the role of the Ownership Review Group, which will be composed of three at-large members of the IPC (selected by the IPC Chair) and be chaired by the IPC Chair. This group shall meet as needed with the following agenda:

1. Review all disclosures submitted that have ownership in dispute.
2. Confirm University ownership as necessary for those disclosures in which originator(s) have indicated Virginia Tech ownership.
3. Review disputes involving sponsor ownership/rights.
4. Review, discuss and reach preliminary conclusions on ownership disputes and forward recommendations to the full IPC.
2.3 Policy Guidelines

This section outlines the criteria to be used by the IPC and its working groups in their deliberations, findings and recommendations. To the extent that individual questions are not specifically addressed, these guidelines will, at the least, give a general indication of intent and philosophy and allow proper interpretation.

A. Ownership of IP

For purposes of this policy creations are divided into two groups:

1. The traditional results of academic scholarship, i.e. scholarly articles, textbooks, literary works, artistic creations and artifacts.

2. The novel results of research such as products, processes, machines, software, biological technology, etc.

   a) With regard to research data, results, and related materials for projects conducted at the university, under the auspices of the university, or with university resources, please refer to Policy 13015, “Ownership and Control of Research Results.”

Intellectual properties in the first (traditional) group are considered to make their full contribution to the University's benefit by their creation and by continued use by the University in teaching, further development, and enhancement of the University's academic stature; the presumption of ownership is to the author(s). Thus, unless there is explicit evidence that the work was specifically commissioned by the University, the IP rights remain with the author(s) and the University rights are limited to free (no cost) use in teaching, research, extension, etc. in perpetuity.

Intellectual properties in the second group, as a condition of employment or other involvement in research and/or related activities using University resources, the ownership is to the University (with the originator having a right to share in the benefits derived therefrom in accord with University sharing guidelines). Thus unless there is convincing and explicit evidence that the IP was developed without the use of University resources and/or facilities (which may include but is not limited to any of the following: use of equipment, lab or office space, University time of originator and/or personnel under his/her control, funds supplied by the University and/or funds originating from sponsored research projects and/or donations to University/affiliated companies, etc.), ownership of the IP rests with the University and the originator(s) do hereby assign ownership, right, title, and interest in any IP, discovery, or invention to the University.

Within the above general guidelines, the following situations are more specifically defined:

1. Ownership of IP developed by students: The University will not generally claim ownership of IP created by students. However, in the matter of course generated IP, including courses for research or independent credit, the student(s) shall have ownership only if they made use of resources that are a) made available by the College/Department administering the University course to all students enrolled in the course; and b) provided to all students enrolled in the course for academic credit when there are no pre-existing obligations for the University in connection with such course generated intellectual property, and/or the student(s) are not paid by the University in the scope of such course.
A student may choose to assign the ownership right in IP to the University and/or VTIP if all the parties agree to such a transfer.

If students develop IP in their capacity as employees, such IP shall be governed as set forth above and ownership is automatically vested in the University, including novel results of research in which the originator(s) do hereby assign ownership, right, title, and interest in any IP, discovery, or invention to the University.

2. In the event the following condition(s) apply, visiting scholars and volunteers do hereby assign any IP rights to the University when:
   a) working on a research project funded by Virginia Tech or an entity outside of Virginia Tech sponsoring the research through Virginia Tech from which the IP was created; or,
   b) employed or receiving payment from Virginia Tech related to a project from which the IP was created; or,
   c) University resources not available to the public are used in the creation of the IP.

3. Sponsor Rights: In the case in which an IP is generated as a result of research funded by a private sector company under a sponsored research project, the IP rights of the sponsor as defined in the applicable clauses ("Patents & Copyrights," "Intellectual Properties," "Inventions," etc.) of the Sponsored Research Agreement (as approved by the Vice President for Research or their designee and signed by an authorized officer of the University) shall take precedence over the rights of the University/inventor(s). Any residual rights not accruing to the sponsor shall be as defined in the general guidelines above.

4. Federal Agency Rights: Research projects sponsored by an agency of the federal government have statutory IP rights that are limited (in almost all cases) to a non-exclusive non-transferrable royalty free license to any patent generated by the research, provided the inventor(s)/University advise the agency in a timely manner of their intent to retain their rights and provide for legal protection (i.e. patenting). It is the responsibility of the researcher to advise the agency of the creation of the IP and (with the assistance of the University IP manager, VTIP) advise of the protection steps being undertaken. The residual rights not belonging to the sponsoring agency shall be as defined in the general guidelines above.

5. Joint Inventorship: For IPs generated by a team of inventors in which one or more are not members of the faculty/staff/supported students, each inventor is usually entitled (by law) to shared ownership of the entire right. The University's claim to the shares of University-associated inventors will be as outlined in these guidelines. Ownership of outside inventors will vest in them or their assignees.

6. Special Situations: In the event that an IP ownership situation arises which is not addressed in either the general or specific guidelines outlined above, the IPC shall make a recommendation based on the spirit of the guidelines. A record of the rationale used to arrive at their recommendation shall be kept and used as a precedent for the handling of future special situations if applicable.

7. Commissioned Works: There are times when the University will choose to enter into a contractual arrangement to commission a specific work or undertaking. The University, as the commissioning party, may be expected to maintain certain rights of third parties. These rights are negotiable on a case by case basis, but generally the University expects, at a minimum:
a) Exclusive right to give premiere performances of the commissioned work; and,
b) Exclusive performance rights for a limited period of time; and,
c) Exclusive right to give premieres in other venues; and,
d) Right to make the first commercial recording of the work; and,
e) The right to be credited as the commissioner of the work in published editions, recordings, and programs for all future performances; and,
f) The nonexclusive right to use the commissioned work, without cost, in teaching, research, outreach, etc., in perpetuity.

For Scholarly Articles: Authors grant to the university a nonexclusive license to their scholarly articles in order to provide open access (free, public, online access) to them via the university repository. However, anything deposited in the university repository is subject to the provisions of all the numbered paragraphs above. An author may waive the license for a particular article or delay access for a specified period of time. The university may not sell the articles. Authors deposit in the university repository an electronic copy of their unformatted, post peer-review, accepted manuscript for each scholarly article within one month after the date of its publication. Upon deposit of accepted manuscripts into the university repository, the university grants authors a nonexclusive license to share accepted manuscripts elsewhere.

B. Obligation to Disclose

While it is recognized that faculty and staff mission and expertise is concentrated and directed in areas other than commercial utilization, originators of new technology shall submit a disclosure when any IP is developed. Timely (i.e., before publication or other enabling non-confidential disclosure) submission of a disclosure to VTIP may also be critical to the value of the IP.

To the extent (and as soon as) the researcher/inventor/creator obtains research results that may be considered an IP and recognizes that they may have potential for commercial utilization there exists an obligation to bring these results to the attention of VTIP in the form of a disclosure.

If, in the absence of a timely disclosure, commercial utilization of a technology takes place with the direct or indirect involvement of the originator(s) but without involvement by the University it will be deemed that the originator(s) have not fulfilled their obligation to disclose and the University may:

1. Take whatever legal and/or business action is necessary to protect its rights and rightful share of financial benefits and ownership.
2. Deny to originator(s) any share of revenues which would otherwise accrue to them under this policy.

C. Notification and Granting Back Rights to the Inventor(s)

As a general rule, the IP in question may be released back to the Inventor(s) if VTIP and the University do not wish to pursue protection or other use. The Inventor can request that the rights be released to him or her to pursue other avenues. In the event ownership is released to the Inventor(s), as a condition of the transfer, Virginia Tech shall be granted a non-exclusive, fully paid-up, royalty free license to use the IP for internal teaching, research, and outreach purposes.

Commented [PV3]:
#8 is added to provide the Open Access policy that will allow all Virginia Tech authors to submit accepted manuscripts for scholarly articles to our university institutional repository.

For more information on open access, how to deposit accepted manuscripts, and other Frequently Asked Questions, see this web page from the Commission on Research Open Access Policy Working Group: https://sites.google.com/a/vt.edu/cor-oa-policy-working-group/frequently-asked-questions, or reach out to the working group with questions or comments to: openaccess@vt.edu
Any request to release the invention to the inventor(s) should be communicated to VTIP in a timely manner to preserve the potential for IP protection. It is University’s discretion to follow such a request (if permissible under University policies, applicable law, sponsorship agreements or other contractual obligations).

D. Revenue Sharing

Revenues generated by the successful commercialization of IPs owned by the University (whether or not protected by patent and/or copyright) shall be shared equally between the University and the originator(s) of the IP, subject to the conditions and exceptions outlined below.

1. Revenues subject to sharing include royalties, licensing fees, incentives, etc. received by the assignee licensor organization, less the costs/expenses described below. Specifically excepted from sharing are payments received and designated for specific purposes such as sponsored or unrestricted research grants, services to the University, research equipment and/or materials, consulting fees to researchers, etc. These payments will go directly to the designated entity and purpose.

2. Also excepted from sharing are revenues resulting from:
   a) Tasks and/or activities specifically and explicitly assigned to employees by an administrative unit of the University, or
   b) Activities and/or tasks clearly defined in the written, University approved, policy of an administrative unit of the University.

   Such revenues, flowing through the University assignee organization, will accrue to the originating administrative unit of the University net of development costs.

3. Expenses to be subtracted from gross revenue before sharing shall be limited to documented direct and indirect costs for protection (patenting), marketing and development of the IP. Specifically excluded are costs incurred in the generation of the IP (i.e. research costs). Development costs shall include (but not be limited to) payments made to (or retained by) non-affiliated organizations (e.g. Research Corp. Technologies, CIT, etc.) involved in the process of commercializing the IPs owned by the University.

4. Non-cash compensation for rights to an IP may be accepted but only with the informed consent of the originator(s) of the IP. The share of net revenue not paid to the originator(s) (50 percent) shall be applied as follows:
   a) A portion equivalent to at least 10 percent of total net revenue may be distributed to the originator(s)’ primary unit(s) (e.g. Departments, Centers, etc.).
   b) The remainder to the University assignee organization (VTIP).

E. Management Responsibility

Virginia Tech Intellectual Properties, Inc. (VTIP), a non-profit corporation affiliated with the University, has been established and charged with the mission of protecting and utilizing IPs for the benefit of the University.
All IPs assigned to the University shall flow to VTIP by assignment for operational management. The IPC should make appropriate inputs and recommendations as to disposition and priority of individual IPs. Originator(s)' inputs/suggestions to VTIP are also appreciated.

F. Right Of Appeal

The originator(s) of an IP covered by this Policy shall have the right to appeal application of the policy to the IPC.

The IPC will formulate recommendations relative to each such appeal, and will forward both the appeal and its recommendations to the Office of the Executive Vice President and Provost in a timely manner. The Executive Vice President and Provost will determine the University's response to each appeal, and will so notify the originator(s) and the IPC.

If the originator(s) disagree with the IPC recommendation regarding ownership, a written appeal to the Executive Vice President and Provost must be filed within (30) thirty days of receipt of notification of the IPC recommendation. This appeal should contain an exposition of the facts as seen by the originator(s), any information they deem pertinent to the case, as well as any applicable citations of policy guidelines. A copy of the appeal document should be sent to the IPC via its Chair.

Upon receipt of the appeal, the Executive Vice President and Provost may elect to consult with any and all concerned prior to reaching a decision in the case.

In the event that any member of the University (faculty, staff or student) perceives and/or becomes aware of any irregularity in the inventorship/authorship of an IP disclosed (or about to be disclosed) to VTIP or the IPC he/she should bring it to the attention of the other inventors/authors involved and/or the Department Chair(s) (or the director or unit leader in situations outside the traditional academic departments) concerned in an attempt to resolve the conflict equitably and amicably. Failing such resolution, the facts of the cases should be submitted in writing within (30) thirty days to the Vice President for Research (with copy to the Chair of the IPC) with a request for review by the Ownership Review Group of the IPC.

Upon receipt of such a request, the Ownership Review Group shall review the facts of the case, convene a hearing for all concerned parties, reach a conclusion and present a synopsis of the case and a recommendation to the full IPC who will, in turn, make a recommendation to the Executive Vice President and Provost.

G. Policy Exceptions

The President of the University may, upon recommendation by the IPC and the VP for Research and Innovation, authorize exceptions to this Policy. Such exception shall be memorialized in writing and shall set forth the extent of any deviation from this Policy. It is the intent of this clause that such exceptions be granted sparingly and in the best interest of the entire University.

3.0 Procedures
4.0 Definitions

5.0 References

Policy 13015, “Ownership and Control of Research Results.”

6.0 Approval and Revisions

Approved by University Council, November 17, 1986.
Approved by the President, November 17, 1986.
Approved by Board of Visitors, December 5, 1986.

- Revision 1
  Approved by University Council, December 2, 1991.
  Approved by the President, December 2, 1991.

- Revision 2
  August 31, 1999: Revised membership titles to reflect changes in titles, responsibilities, and University Council By-laws.

- Revision 3
  April 15, 2008: Revised membership titles to reflect changes in titles and responsibilities.

- Revision 4
  Revised extensively to reflect Code of Virginia requirements of state employees regarding disclosure, to provide language about student IP, reflect current operating procedures of the IPC, and address “Commissioned Works.”
  Approved by University Council, April 29, 2013.
  Approved by President Charles W. Steger, April 29, 2013.
  Approved by Board of Visitors, June 3, 2013.

- Revision 5
  Revised extensively to provide additional language about student ownership of IP, to address the process by which IP may be released back to the inventor, and to address the process by which exceptions to Policy 13000 will be reviewed and approved.
  Approved by the Board of Visitors on June 1, 2015
  Approved June 30, 2015 by University President, Timothy D. Sands

- Revision 6
Revised to provide additional language in 2.3.A. #8 regarding licensing and process for open access deposit of the accepted manuscript of Virginia Tech authors’ scholarly articles in the university’s institutional repository, and for Virginia Tech authors to be able to post such accepted manuscripts elsewhere as well. Also added references to the related Policy 13015, “Ownership and Control of Research Results.” This revision is not retroactive.

Approved by the Board of Visitors on
Approved by University President, Timothy D. Sands
RESOLUTION TO APPROVE APPOINTMENT TO THE VIRGINIA COAL AND ENERGY RESEARCH AND DEVELOPMENT ADVISORY BOARD

WHEREAS, the Virginia Coal and Energy Research and Development Advisory Board was established in 1977 by the enabling legislation for the Virginia Center for Coal and Energy Research, and the legislation requires approval by the Virginia Tech Board of Visitors of new appointments, reappointments, and changes in the membership of the advisory board; and

WHEREAS, the proposed new appointment is Mr. Larry E. Jackson; and

WHEREAS, Mr. Jackson is the external affairs director for Appalachian Power’s Virginia and Tennessee service areas, has a degree in electrical engineering from West Virginia University and an MBA from Averett University, and is a registered professional engineer in Virginia and West Virginia;

NOW, THEREFORE, BE IT RESOLVED, that Mr. Larry E. Jackson be appointed as a new member of the Virginia Center for Coal and Energy Research and Development Advisory Board beginning April 1, 2021, and ending December 31, 2025.

RECOMMENDATION:

That the Board of Visitors approve this resolution appointing Mr. Larry E. Jackson to the Virginia Center for Coal and Energy Research and Development Advisory Board.

March 22, 2021
RESOLUTION TO REVISE FACULTY HANDBOOK PROMOTION AND TENURE GUIDELINES

WHEREAS, chapter three of the university’s Faculty Handbook -- Employment Policies and Procedures for Tenured and Tenure-Track Faculty -- has not been thoroughly revised in many years; and

WHEREAS, based upon the shared belief of the Faculty Senate and the Office of the Provost that a thorough revision was warranted, a Commission on Faculty Affairs working group was formed for this purpose in the fall of 2016; and

WHEREAS, the working group sought to simplify and standardize procedures, clarify and update requirements, and ensure the equitable treatment of faculty while maintaining Virginia Tech’s high academic standards; and

WHEREAS, the Commission on Faculty Affairs has periodically presented the revision to the Faculty Senate, department heads/chairs, and deans and incorporated many of the suggestions these groups have offered; and

WHEREAS, the Faculty Senate and the Office of the Provost believe that the revision, which includes changes to the guidelines for processing promotion and/or tenure cases and the standards by which cases are evaluated, improves upon the guidelines and traditions that have served Virginia Tech well for many years; and

WHEREAS, the Vice Provost for Faculty Affairs will work with faculty and administrators to facilitate the transition between the current and new guidelines;

NOW, THEREFORE, BE IT RESOLVED, that the Faculty Handbook promotion and tenure guidelines will be revised according to the full text included in Appendix 2; and

BE IT FURTHER RESOLVED, that these revised guidelines will become effective beginning with faculty considered for promotion and/or tenure during the 2022-2023 academic year.

RECOMMENDATION:

That the Board of Visitors approve this resolution for inclusion in the university’s 2021 – 2022 Faculty Handbook.

March 22, 2021
Appendix 1: Summary of major changes in Chapter 3 revision

1) Added the following language about limitations on the overall process and review of procedural concerns raised by faculty serving on P & T committees (3.4):

Once a promotion and/or tenure case has been submitted, it must proceed through the processes outlined in this chapter unless the candidate chooses to withdraw his or her case. This is true even if a candidate has accepted a position at another institution: under these circumstances, the case proceeds normally, up to and including the president’s recommendation, but will not be taken to the Board of Visitors.

To ensure the honest discussion of promotion and/or tenure cases, all parties involved must keep the deliberations strictly confidential to the extent permitted by law. As such, the content of conversations and the results of any votes may be discussed only with persons who have a current role in the promotion and tenure process, such as committee members or administrators. However, faculty serving on promotion and tenure committees who believe that Faculty Handbook procedures are not being followed may bring their concerns to the Faculty Review Committee for confidential review as outlined in chapter one, “Faculty Review Committee.”

2) Added description of P & T documents required for each department (3.4):

Each department will maintain promotion and/or tenure guidelines in a single document that follows the university template and includes all information regarding departmental procedures and expectations for reappointment, progress toward promotion and/or tenure, and the evaluation of promotion and/or tenure cases. Nothing in these guidelines shall supersede or contradict the provisions of the Faculty Handbook. If a college elects to adopt guidelines that establish a college-wide standard for promotion and/or tenure, with the dean’s approval, departments may maintain a set of guidelines that interpret the college-wide standard within the context of the department’s disciplines and traditions. All guidelines will be approved by faculty (through department- and/or college-level governance), the college-level committee and the dean, and the provost’s office, and will be made available on-line. Revisions to these guidelines must also be approved by the faculty, the college, and the provost’s office. In addition to tenure-track faculty, guidelines will cover the promotion of all non-tenure-track faculty.

3) Revised the basic criteria for promotion and/or tenure and added the use of “Expectations and Indicators For Promotion and/or Tenure.” Changed the categories (Instruction, Research, etc), and most of the language used to describe them, to agree with the Provost’s guidelines (3.4.4):

Current: Each candidate for tenure and/or promotion to associate professor is evaluated in the light of the triple mission of the university: learning, discovery, and engagement. Although not all candidates are expected to have equal levels of commitment or equal responsibilities in each of these missions, a high level of general competence is expected in recognition of the need for flexibility in the future establishment of priorities in academic programs. Beyond that basic foundation of competence, decisions related to tenure or promotion to associate professor require evidence of excellence in at least one area.

The award of tenure is based on the achievement of distinction in an area of learning and the prediction of eminence throughout the individual’s professional career. The documentation and evaluation should recognize some significant impact of the candidate’s contributions beyond the borders of the university. If the primary strength is in instruction, there should be recognition that the candidate’s pedagogical contributions have influence beyond the immediate classroom; if in...
research, that there is significant impression on colleagues nationally; if in outreach that the influence of the contributions reaches beyond the immediate clientele.

Proposed: In accordance with their assignments and as outlined in the “Virginia Tech Guidelines for Promotion and Tenure Dossiers” document available from the provost’s office, candidates for promotion and/or tenure will be evaluated in the following categories: teaching, scholarship, and service. While candidates are not expected to have equal levels of commitment or equal responsibilities in all of these areas, scholarship is expected of all tenure-track faculty to a degree and in a discipline appropriate for their assignment.

Teaching (Includes advising/mentoring): Teaching is a multifaceted activity that includes formal and informal advising/mentoring. In any assessment of a candidate for promotion and/or tenure, both the quality and the quantity of the individual’s achievements in teaching and advising/mentoring should be considered. Those evaluating candidates for promotion and/or tenure should give special consideration to teaching effectiveness: faculty must demonstrate the ability to evaluate scholarship applicable to their field and effectively teach their discipline to students.

Scholarship (Includes research, creative activities, and extension activities): Scholarship, broadly defined at Virginia Tech as the discovery, transmission, and/or application of knowledge, takes many forms, including but not limited to research, creative activity, and extension activity. While both the quality and quantity of a candidate’s achievements should be examined, quality should be the primary consideration. Quality should be defined largely in terms of the work’s importance in the progress or redefinition of a field or discipline, the establishment of relationships among disciplines, the improvement of practitioner performance, or the creativity of the thought and methods behind it. To be awarded tenure, in addition to demonstrating productivity as a scholar, a candidate must prove evidence that their scholarship has growing impact nationally or internationally and the potential for greater impact in the future. Promotion to the rank of professor requires evidence of ongoing or renewed productivity, and the realization of a candidate’s potential for greater impact nationally or internationally, including a description of how their scholarship has influenced their field.

Service (Includes engagement, university service, professional service, medical service, inclusion and diversity, and additional outreach and extension activities): In the spirit of Ut Prosim (That I may serve) and the land-grant mission, faculty are expected to use their knowledge, creativity, and expertise to improve the human condition and engage the communities of which they are a part. Candidates must demonstrate their contributions to the governance, development, and vitality of the university, their academic professions, and other relevant communities at the local, state, national, and/or international level. The quality and effectiveness of healthcare delivery and outreach and extension activities that are not considered scholarship should also be documented.

Evaluators must consider the unique features of every candidate’s department, discipline, and assignment. Therefore, as part of their promotion and/or tenure guidelines (see Chapter 3, “Promotion and Tenure”), each department (or college, when college-wide guidelines are applied) is required to have an “Expectations and Indicators for Promotion and/or Tenure” section that accounts for disciplinary and programmatic differences unique to and within the department(s) and
specifies what is required of their faculty members to fulfill the general expectations outlined above. Departments or colleges should carefully assess and state the overall standards of professional performance and contribution they consider minimally acceptable for the conferral of promotion and/or tenure. These expectations must be adhered to by evaluators at every stage of the promotion and/or tenure process. Colleges that adopt a college-wide set of promotion and/or tenure guidelines will ensure that the "Expectations and Indicators for Promotion and/or Tenure" section accounts for differences within and across departments and schools.

Since expectations can change, tenure candidates will be evaluated according to the expectations and indicators in effect at the time of their appointment. Candidates for promotion to professor will be evaluated according to the expectations and indicators in place at the time of their application for promotion.

3) Heads/chairs no longer have the option to serve on department committees (3.4.4.1).

4) For mandatory cases, full college review (both dean and college committee) of no/no decisions at the department level will be automatic (3.4.4.2).

5) Members of college and university committees must be given a period of time to discuss the cases w/o deans or the provost in attendance (3.4.4.2 & 3.4.4.3).

6) The guidelines covered in a document titled "Promotion and/or Tenure Procedures for University Committee Deliberations and Notifications" are not in the Faculty Handbook. We included a stripped-down version of those guidelines and made clear that the handbook provides the guidelines for the Univ. P & T Committee procedures, not the other way around (3.4.4.3).

7) Clarified that the University Promotion and Tenure Committee only votes once by removing the use of terms such as "straw votes" or "straw ballots" in favor of the following (3.4.4.3):

   The committee then rates the cases to clarify which cases need more discussion.

8) Added a candidate notification sub-section. Candidates are notified of the decision at each level of the process (3.4.4.4):

   As a promotion and/or tenure case proceeds, the candidate must be notified in writing of the recommendations made by each committee and administrator.

   Any negative recommendations, whether by a committee or administrator, must include all substantive reasons for that recommendation, including references to the "Expectations and Indicators" section of the relevant promotion and/or tenure guidelines, as well as options for appeal. While notification letters may include excerpts from committee or administrator letters, they cannot include the results of any votes, the names of external evaluators, or statements from their evaluations.

9) Revised the grounds for appeal and clarified the relationship between an appeal and a grievance (3.4.5):

   Current: The appeal can only be based on grounds that certain relevant information was not provided or considered in the decision, or that the decision was influenced by improper consideration.

   Proposed: An appeal can be based on the following claims only: department criteria established in the "Expectations and Indicators" section of the relevant department's promotion and/or tenure guidelines were not appropriately applied; material from the dossier was unavailable to or
disregarded by reviewers through no fault of the candidate; or information in the dossier was not considered in a fair and objective manner.

Additionally, faculty have the option to grieve procedural violations of the promotion and tenure process—including violations of the appeal process presented in this section—after a negative decision on an appeal or instead of filing an appeal in the first place. Since the grievance procedures allow the grievant to state both the grievance they believe they have experienced and the relief they seek, it has a wider range of possible outcomes than the appeal process. However, because it is a slower process that may not be completed until the promotion and/or tenure cases in a given year have been decided, and because faulty cannot grieve “items falling within the jurisdiction of other university policies and procedures,” a grievance should be thought of as a means for faculty to seek an outcome they cannot seek through the appeal process. The grievance process is described in chapter three, “Faculty Grievance Policy and Procedures.”

10) Expanded which cases can be appealed and simplified the appeal process (3.4.5.2):

Current: Occasionally faculty members are evaluated for a tenured appointment during the probationary period but before the final probationary year. In such a case, there is no recourse to appeal or review of a negative decision, at whatever level it is reached, because of the certainty that the evaluation will be undertaken again within a limited time.

Evaluation for a tenured appointment is mandatory in the sixth year of probationary service unless the faculty member has given written notice of resignation from the faculty. If both the departmental committee and the department head or chair agree that the faculty member’s record does not warrant a tenured appointment, there is an automatic review of the candidate's dossier by the dean. If the dean concurs, the faculty member is notified by the dean, in writing, of the decision and the specific reasons for it. The faculty member may then request, through the dean, that the college committee on promotion and tenure independently review the decision. The faculty member presents the appeal in writing as specified in chapter three “Appeals of Decisions on Reappointment, Tenure, or Promotion.” The faculty member may elect to present oral arguments to the committee as well. If the committee concurs with the decision, the decision is final. The dean so notifies the faculty member, in writing, and no further appeal is provided.

During the automatic review of the candidate’s dossier, the dean may wish to reserve judgment. In such a case, the dean notifies the faculty member of the departmental decision and tells the faculty member that he or she is requesting the college committee on promotion and tenure to undertake an independent review, as specified in the previous paragraph, and to make a recommendation. Should the college committee and the dean concur with the departmental decision, the decision is declared final, the faculty member is so notified, and no further appeal is provided. The specific reason for the decision is provided to the faculty member in writing.

In any case of college-level review of a negative departmental decision, a positive recommendation by either the college committee or the dean is sent with the dossier to the University Promotion and Tenure Committee in the same way as in the usual review process.

If the college committee and the dean undertake the review based on a positive recommendation of either or both the departmental committee and the department head or chair and if the college committee recommends that tenure not be awarded and the dean concurs, the faculty member is notified of the negative decision with reference to appeal procedures. The specific reasons for the decision are furnished to the faculty member in writing. The faculty member may then appeal to the provost for review of the decision by the university committee, which makes a recommendation to
the provost for a final decision. The faculty member presents the appeal in writing as specified in chapter three, "Appeals of Decisions on Reappointment, Tenure, or Promotion." No further appeal is provided. The university committee may choose to hear oral arguments.

Should the provost not concur with a positive recommendation from the University Promotion and Tenure Committee, whether that recommendation culminates a usual review or an appeal, the faculty member is so notified in writing of the specific reason for the decision. The faculty member may appeal to the Faculty Review Committee. That committee investigates the case and, if the differences cannot be reconciled, makes a recommendation to the president on the matter. The president’s decision is final.

During review following an appeal, the college committee may find reason to believe that the departmental evaluation was biased or was significantly influenced by improper considerations. In that case, the reviewing committee may request that the college dean form an ad hoc committee to re-initiate the evaluation. The ad hoc committee is composed, as feasible, of faculty members in the candidate’s department or in closely allied fields and does not contain any members of the original committee.

Should the university committee make such a finding in the review of an appeal relative to the college evaluation, it requests the dean to form a new ad hoc committee at the college level. The ad hoc committee makes a recommendation to the committee that requested its formation.

 Proposed: Appeal of negative department or college decisions: Because all mandatory tenure cases, even those given a negative recommendation by the department committee and the head or chair, receive a full college level review, there is no appeal of a negative tenure decision at the department level.

With all non-mandatory cases, whether promotion and/or tenure, if the committee and the relevant administrator both make negative recommendations, the candidate may appeal that negative decision to the next level in the process. The faculty member has the right to appear before the committee considering the appeal and present arguments.

If either the college committee or the dean grants the appeal of a negative department decision, the case resumes normal consideration, beginning with the college committee and dean. If either the University Promotion and Tenure Committee or the provost grants the appeal of a negative college decision, the case resumes normal consideration, beginning with the University Promotion and Tenure Committee and the provost. At either the college or university level, if the committee and the relevant administrator both make negative recommendations, the appeal is denied and no further appeal is provided.

Appeal of negative university decisions: Because all recommendations from the University Promotion and Tenure Committee and the provost are forwarded to the president, candidates may appeal negative recommendations of either or both to the Faculty Review Committee. The faculty member has the right to appear before the committee to present arguments. The Faculty Review Committee investigates the case and makes a recommendation to the president.

The president’s recommendation to the Board of Visitors, and the Board of Visitors’ final decision, cannot be appealed.

11) Added a table of appeal options (3.4.5.2)
Appendix 2: Full text of Chapter 3 revision

3.4  Promotion and Tenure

Promotion in rank and the granting of tenure are based on a faculty member’s contributions to the university in the areas of teaching, scholarship, and service. Decisions about promotion and/or tenure are guided by the Virginia Tech Principles of Community (see chapter two, “Virginia Tech Principles of Community”).


Faculty members being considered for promotion and/or tenure have their dossiers reviewed at as many as three levels: by a department committee and the head or chair, by a college committee and the dean, and by a university committee and the provost.

Once a promotion and/or tenure case has been submitted, it must proceed through the processes outlined in this chapter unless the candidate chooses to withdraw their case. This is true even if a candidate has accepted a position at another institution: under these circumstances, the case proceeds normally, up to and including the president’s recommendation, but will not be taken to the Board of Visitors.

To ensure the honest discussion of promotion and/or tenure cases, all parties involved must keep the deliberations strictly confidential to the extent permitted by law. As such, the content of conversations and the results of any votes may be discussed only with persons who have a current role in the promotion and tenure process, such as committee members or administrators. However, faculty serving on promotion and tenure committees who believe that Faculty Handbook procedures are not being followed may bring their concerns to the Faculty Review Committee for confidential review as outlined in chapter one, “Faculty Review Committee.”

Although some participants in the review process may serve at more than one level—for example, a departmental committee member may also serve on the college committee—participants may vote only once on a case and must vote at their first opportunity to do so. A faculty member may not serve on any committee that is evaluating a spouse, family member, or other individual with whom they have a close personal relationship. (See chapter two, “Conflicts of Interest.”)

Each department will maintain promotion and/or tenure guidelines in a single document that follows the university template and includes all information regarding departmental procedures and expectations for reappointment, progress toward promotion and/or tenure, and the evaluation of promotion and/or tenure cases. Nothing in these guidelines shall supersede or contradict the provisions of the Faculty Handbook. If a college elects to adopt guidelines that establish a college-wide standard for promotion and/or tenure, with the dean’s approval, departments may maintain a set of guidelines that interpret the college-wide standard within the context of the department’s disciplines and traditions. All guidelines will be approved by faculty (through department- and/or college-level governance), the college-level committee and the dean, and the provost’s office, and will
be made available online. Revisions to these guidelines must also be approved by the faculty, the college, and the provost’s office. In addition to tenure-track faculty, guidelines will cover the promotion of all non-tenure-track faculty.

**A note on the Promotion and Tenure section of the Faculty Handbook:** Throughout this section, it should be understood that departmental procedures, expectations, and standards also apply to schools. For example, the procedures for department-level committees are also the procedures for school-level committees.

### 3.4.1 Tenure Eligibility (unchanged)

Tenure is an institution developed to protect the academic freedom of the teaching faculty in institutions of higher education. Eligibility for tenure consideration is limited to faculty members holding regular faculty appointments of 50 percent to 100 percent in academic departments. Tenure is not granted to faculty members with temporary appointments or to administrative and professional faculty. Individuals who hold tenure in academic departments and are also appointed to administrative positions, however, continue to hold tenure in those departments.

Full-time administrators who also hold appointments in academic departments and engage in teaching and research may be recommended for tenure in such departments.

### 3.4.2 Pre-tenure Probationary Period and Reviews of Progress Toward Promotion and/or Tenure

**Pre-tenure probationary period:** The term “probationary period” (“pre-tenure”) is applied to the succession of term appointments that an individual undertakes on a full- or part-time regular faculty appointment, and during which continued evaluation for reappointment and for an eventual tenured appointment takes place. The probationary period for faculty members on term appointments begins on either July 1 or August 10 of the calendar year in which their initial full-time appointment begins, depending on whether they are on a calendar year or academic year appointment, regardless of the month in which their services are initiated. (The probationary period for new faculty appointed for spring semester begins the following fall even though the spring contract period officially begins December 25.)

The initial appointment for assistant professors, associate professors, and professors employed without tenure is ordinarily a period of no less than two years. Multiple-year reappointment may be subsequently recommended.

The maximum total period for full-time probationary appointments is six years, unless an approved extension is granted. Decision about tenure, if not made earlier, is made in the sixth year (mandatory year) of the probationary appointment. If the tenure decision made in the sixth year is negative, a one-year terminal appointment is offered.
CFA 2020-21A (for 1st reading in University Council)

Up to three years of appropriate service at other accredited four-year colleges and universities may be credited toward the six-year probationary period, as specified in chapter three, “Guidelines for the Calculation of Prior Service.”

A faculty member on a probationary appointment who wishes to request a leave of absence should consult with their department head or chair about the effect of the leave on the probationary period, taking into account the professional development that the leave promises. The request for leave should address this matter. The provost's approval of the request specifies whether the leave is to be included in the probationary period.

Pre-tenure faculty members may request a term part-time appointment as described in chapter three, “Part-Time Tenure-Track and Tenured Appointments,” for reasons of balancing work and family or personal health issues. In such cases, the probationary period is extended proportionately. For example, two years of service at 50 percent count as one year of full-time service. The term appointment may be renewed. (A permanent part-time appointment may be requested and granted following award of tenure.)

In determining the mandatory tenure review year for those with partial appointments, general equivalency to full-time appointments is expected, so that approximately five years of full-time equivalent service is expected prior to the mandatory tenure review year if no tenure clock extensions are granted, six years if one year of extension is granted, and seven years if two extensions are granted. (In summing partial years of service, a total resulting in a fraction equal to or less than 0.5 is rounded down, and a fraction greater than 0.5 is rounded up.) However, review for tenure must occur no later than the tenth year of service, resulting in somewhat less full-time equivalent service (4.5 years) for a faculty member with 50 percent appointment throughout all nine probationary years prior to review. If a faculty member is denied tenure following a mandatory review, a one-year terminal appointment is offered.

Faculty members on part-time appointments may request a tenure clock extension in accordance with chapter three, “Probationary Period Extensions (Extending the Tenure Clock).” (Extensions are granted in one-year increments, not prorated by the part-time appointment percentage.) However, the extension is not approved if it results in a mandatory review date beyond the tenth year.

**Pre-tenure reviews:** Under usual circumstances, departmental promotion and tenure committees review the professional progress and performance of pre-tenure faculty members two times during the probationary period, usually in their second and fourth or third and fifth years. The timing of the reviews depends upon the nature of the faculty member’s discipline and must be clearly indicated in written department policies. The terms of offer identify the initial appointment period. Pre-tenure reviews may be delayed if there is an approved extension as described above. Changes or variations in the standard review cycle must be documented in writing.

Reviews are substantive and thorough. At minimum, departmental promotion and tenure committees must review the faculty member’s relevant annual activity reports, peer evaluations of teaching, authored materials, or other artifacts of scholarship or creative activity. It is strongly suggested that promotion and tenure committees and pre-tenure faculty use the promotion and

Deleted: and
tenure dossier format (available on the provost’s website) to organize and present information for review.

The pre-tenure reviews should analyze the faculty member’s progress toward promotion and/or tenure and offer guidance regarding future activities and plans. All reviews must be in writing, with the faculty member acknowledging receipt by signing and returning a copy for their departmental file. In addition, the promotion and tenure committee chair and the department head or chair meet with the faculty member to discuss the review and recommendations. Faculty members are also encouraged to seek guidance and mentoring from senior colleagues and the department head or chair. Pre-tenure faculty members bear responsibility for understanding and meeting departmental expectations for promotion and/or tenure.

The initial review for a part-time faculty member should occur no later than the third year of service (regardless of percent of employment) to give early feedback on their progress. At least two reviews should be conducted for part-time faculty members during their probationary period; more are recommended. The anticipated schedule for such reviews for reappointment and for the mandatory review for tenure should be documented in writing as part of the agreement for the part-time appointment. Changes should be agreed upon and documented by the faculty member and department.

In the fall semester prior to applying for tenure in a non-mandatory year, a candidate must inform the head or chair of their intention to apply, thereby giving the department time to conduct an additional review of the candidate’s progress, if such a review is deemed necessary. The extent of this review is determined by each department or school.

**Review of progress toward promotion to professor:** At least one review of progress toward promotion to professor should be conducted three to five years after promotion and tenure is awarded (or after tenure is awarded at the current rank of associate professor). The review—required for faculty promoted and tenured during 2012–13 and thereafter—is to be substantive and thorough. At minimum, an appropriate departmental committee (e.g., promotion and tenure committee, personnel committee, annual review committee) must review the faculty member’s relevant annual activity reports, peer evaluations of teaching, and authored materials since promotion. The faculty member may wish to complete a draft promotion dossier (using the format available on the provost’s website) to organize and present information for review.

The review should be developmental and recommend future activities and plans that will position the faculty member for promotion to professor. All reviews must be in writing, with the faculty member acknowledging receipt by signing and returning a copy for their departmental file. In addition, the faculty member may request a meeting with the promotion and tenure committee chair and the department head or chair to discuss the review and recommendations. Faculty members are also encouraged to seek guidance and mentoring from senior colleagues and the department head or chair.

There is no specification for minimum or maximum time of service in the rank of associate professor with tenure. Consideration for promotion to professor may be requested of the department head or
chair by a faculty member at any time. However, in the fall semester prior to applying for promotion to professor, a candidate must inform the head or chair of their intention to apply, thereby giving the department time to conduct a review of the candidate’s progress, if such a review is deemed necessary. The extent of this review is determined by each department or school.

3.4.2.1 Probationary Period Extensions (Extending the Tenure Clock)

Upon application, a one-year probationary period extension is automatically granted to either parent (or both, if both parents are tenure-track faculty members) in recognition of the demands of caring for a newborn child or a child under five newly placed for adoption or foster care. An extension may also be approved on a discretionary basis for other extenuating non-professional circumstances that have a significant impact on the faculty member’s productivity, such as a serious personal illness or major illness of an immediate family member. In rare cases, extraordinary professional circumstances not of the faculty member’s making may be acceptable justification for an extension, for example exceptional delays in procuring critical equipment, laboratory renovations, or other elements of the committed start-up package essential to establishing a viable research program.

Faculty members who utilize this policy are expected to fulfill their usual responsibilities during the probationary period extension unless they are also granted a period of modified duties or unless other arrangements are made (see chapter three, "Modified Duties").

Probationary period extensions are granted in one-year increments. A cumulative total of two years is usually the maximum probationary period extension for any combination of reasons. Requests should be made within a year of the qualifying event (such as the arrival of a child in the family) or extenuating circumstance (such as an illness). The provost may approve exceptions to these limitations.

Requests for a probationary period extension are submitted in writing to the department head or chair. (A form is available on the provost’s website.) Documentation of medical reasons (other than childbirth or adoption) is required prior to approval, and documentation of other extenuating circumstances may also be required. Approvals by the department head or chair, dean, and provost are required for probationary period extensions. The faculty member may appeal denial of the request to the next higher level in their organizational reporting structure.

Regardless of when a candidate granted a probationary term extension applies for tenure—prior to their original mandatory year, in their original mandatory year, or in their extension year—it is very important that all individuals and committees participating in tenure reviews understand that the candidate must be held to the same standard, not a higher or more stringent one, as candidates without such an extension.

A probationary extension usually extends the time frame for each subsequent review and reappointment during the probationary period. For example, an extension granted prior to the fourth year review and reappointment typically delays that review by one year.
3.4.3  Guidelines for the Calculation of Prior Service

At the time of the initial appointment, the department head or chair notifies the new faculty member of their standing regarding the tenure system, including when the appointment will be considered for renewal and the length of the probationary period until mandatory consideration for tenure must be given.

Credit for prior service toward the probationary period may be granted for appropriate service in another accredited four-year college or university but only if the faculty member requests such credit. In such a request, the faculty member presents all prior service undertaken after the completion of the terminal degree appropriate to the field. A maximum of three years may be credited toward probationary service at Virginia Tech. The request must be made in writing within one year of the initial appointment. The specification of credit for prior service toward the probationary period is subject to the approval of the provost on the recommendation of the department head or chair and the dean.

3.4.4  General Expectations for Promotion and/or Tenure

In accordance with their assignments and as outlined in the “Virginia Tech Guidelines for Promotion and Tenure Dossier” document available from the provost’s office, candidates for promotion and/or tenure will be evaluated in the following categories: teaching, scholarship, and service. While candidates are not expected to have equal levels of commitment or equal responsibilities in all of these areas, scholarship is expected of all tenure-track faculty to a degree and in a discipline appropriate for their assignment.

**Teaching (Includes advising/mentoring):** Teaching is a multifaceted activity that includes formal and informal advising/mentoring. In any assessment of a candidate for promotion and/or tenure, both the quality and the quantity of the individual’s achievements in teaching and advising/mentoring should be considered. Those evaluating candidates for promotion and/or tenure should give special consideration to teaching effectiveness: faculty must demonstrate the ability to evaluate scholarship applicable to their field and effectively teach their discipline to students.

**Scholarship (Includes research, creative activities, and extension activities):** Scholarship, broadly defined at Virginia Tech as the discovery, transmission, and/or application of knowledge, takes many forms, including but not limited to research, creative activity, and extension activity. While both the quality and quantity of a candidate’s achievements should be examined, quality should be the primary consideration. Quality should be defined largely in terms of the work’s importance in the progress or redefinition of a field or discipline, the establishment of relationships among disciplines, the improvement of practitioner performance, or the creativity of the thought and methods behind it. To be awarded tenure, in addition to demonstrating productivity as a scholar, a candidate must provide evidence that their scholarship has growing impact nationally or internationally and the potential for greater impact in the future. Promotion to the rank of professor requires evidence of ongoing or renewed productivity and the realization of a candidate’s potential for greater impact nationally or internationally, including a description of how their scholarship has influenced their field.
Service (Includes engagement, university service, professional service, medical service, inclusion and diversity, and additional outreach and extension activities): In the spirit of Ut Prosim (That I may serve) and the land-grant mission, faculty are expected to use their knowledge, creativity, and expertise to improve the human condition and engage the communities of which they are a part. Candidates must demonstrate their contributions to the governance, development, and vitality of the university, their academic professions, and other relevant communities at the local, state, national, and/or international level. The quality and effectiveness of healthcare delivery and outreach and extension activities that are not considered scholarship should also be documented.

Evaluators must consider the unique features of every candidate's department, discipline, and assignment. Therefore, as part of their promotion and/or tenure guidelines (see Chapter 3, "Promotion and Tenure"), each department (or college, when college-wide guidelines are applied) is required to have an “Expectations and Indicators for Promotion and/or Tenure” section that accounts for disciplinary and programmatic differences unique to and within the department(s) and specifies what is required of their faculty members to fulfill the general expectations outlined above. Departments or colleges should carefully assess and state the overall standards of professional performance and contribution they consider minimally acceptable for the conferral of promotion and/or tenure. These expectations must be adhered to by evaluators at every stage of the promotion and/or tenure process. Colleges that adopt a college-wide set of promotion and/or tenure guidelines will ensure that the "Expectations and Indicators for Promotion and/or Tenure" section accounts for differences within and across departments and schools.

Since expectations can change, tenure candidates will be evaluated according to the expectations and indicators in effect at the time of their appointment. Candidates for promotion to professor will be evaluated according to the expectations and indicators in place at the time of their application for promotion.

Besides professional criteria, evaluation for promotion and/or tenure should include consideration of the candidate’s integrity, professional conduct, and ethics. To the extent that such considerations are factors in reaching a negative recommendation, they must be documented as part of the formal review process and included in the candidate's notification.

Every faculty member should maintain a current curriculum vitae, with copies filed in the department and college (or equivalent academic units, as appropriate). The candidate prepares a dossier that includes an executive summary; the candidate’s statement; documentation of performance in the areas of teaching, scholarship, service, and other activities relevant to the candidate’s assignment; and a list of work under review or in progress. The dossier is completed by the inclusion of recommendation statements, both internal and external, which are added as the dossier is reviewed at the department and college levels. For faculty who present significant interdisciplinary or multidisciplinary teaching, research, outreach, or extension activities as part of their record, the dossier should include one evaluation letter from the director, coordinator, or leader of the interdisciplinary or multidisciplinary program.

The promotion and tenure guidelines and a standard dossier cover page are available on the provost’s website. All candidate dossiers must be submitted to the University Promotion and Tenure...
Committee according to the guidelines on the provost's website. The department head or chair, or the department committee, are responsible for ensuring that the dossier conforms to these guidelines.

Candidates who apply for tenure prior to the mandatory year of application must be evaluated by the same standard—not a higher or more stringent one—as candidates who apply in their mandatory year. A candidate who applies for tenure prior to their mandatory year but receives a negative decision can apply again in their mandatory year.

The criteria by which faculty with part-time appointments are evaluated for tenure are the same as the criteria by which full-time faculty are evaluated. Promotion and tenure committees consider years of full-time equivalent service when reaching decisions, excluding any approved probationary period extensions granted under the extending the tenure clock policy.

3.4.4.1 Department Evaluation for Promotion and/or Tenure

Determination of Candidates: In their promotion and/or tenure guidelines, each department will have a process for determining which candidates are to be considered for promotion and/or tenure, including those faculty members in the sixth year of probationary service. Candidates should be identified in the fall semester one year prior to applying for promotion and/or tenure.

Department Committee Composition: Each department must have one or more committees with appropriate faculty representation to evaluate candidates for promotion and tenure, tenure at the currently held rank, and promotion to professor, and make recommendations to the department head or chair. While the process of selecting committees may vary between departments, significant elements of faculty choice, as determined through departmental governance, must be part of the selection process. Some possible methods for committee selection include a combination of elected and appointed representatives; an elected slate significantly larger than the committee size, allowing the department head or chair to appoint the committee from the slate; or a committee elected by the faculty. A minimum committee size of five members is most appropriate in order to achieve adequate representation and effectiveness of committee operations.

Department Committee Evaluation of Candidate: The committee chair or department head or chair furnishes the committee with a dossier for each candidate. After evaluating each candidate's dossier on the basis of criteria established in the “Expectations and Indicators” section of the department’s promotion and/or tenure guidelines, the committee votes and writes a recommendation letter for each candidate, including the division of the vote. The committee’s letter contains the evaluation of the candidate’s performance in each relevant area and provides a recommendation for promotion and tenure, tenure at the currently held rank, or promotion to professor. In the absence of a unanimous recommendation by the committee, the division of the vote must be explained. A minority letter may be attached to the committee’s recommendation letter. All letters must be sent to the head or chair and become part of the dossier.

Given their responsibility to make a separate and independent recommendation on each case, department heads or chairs (or school directors) may not serve as members of department committees: program directors or area chairs may. A department head or chair may convene the
committee, charge the committee with its responsibilities, and discuss the cases. However, subsequent to the discussions with the department head or chair, the committee must discuss the merits of the candidates, frame its recommendations, and take the final vote without the head or chair in attendance and without influence by the head or chair.

**Department Head or Chair Evaluation of Candidate:** The head or chair evaluates each candidate's dossier, including the committee's letter, on the basis of criteria established in the “Expectations and Indicators” section of the department’s promotion and/or tenure guidelines and writes a recommendation letter for each candidate. The head’s or chair’s letter, which may draw from the committee’s letter or letters, contains the evaluation of the candidate’s performance in each relevant area and provides a recommendation for promotion and tenure, tenure at the currently held rank, or promotion to professor. The letter from the head or chair becomes part of the dossier and should follow the guidelines established by the provost, which are available on the provost's website. If the recommendation for promotion and/or tenure varies from the department committee’s, reasons for that variance must be specified, including references to the department’s “Expectations and Indicators.” The department head or chair will share their letter with the department promotion and tenure committee as soon as it is available.

In cases of mandatory (final year of probationary service) tenure decisions, the head or chair sends the dossier of every candidate to the dean, even when both the head or chair and the committee have made negative recommendations. In all other cases, the head or chair sends the dossier of every candidate to the dean, except if the committee’s recommendation is negative and the head or chair concurs. Under those circumstances, the head or chair declares a final decision and no further review is carried out.

The dossiers that the head or chair sends to the dean are accompanied by a statement describing the formation and procedures of the department committee and a summary of the number of candidates considered by the committee in each category (mandatory tenure, non-mandatory-year tenure, and promotion at each rank). The division of the department committee’s vote must be added to the dossier, but otherwise remains confidential.

### 3.4.4.2 College Evaluation for Promotion and/or Tenure

**College Committee Composition:** Each college must have a committee with appropriate faculty representation to review the recommendations sent by department heads or chairs. While the process of selecting committees may vary between colleges, rules governing eligibility and selection of college committee members and the committee chair, as well as operating guidelines for the committee’s deliberations, must be documented and formally approved by the faculty. Significant elements of faculty choice must be part of the selection process. Some possible methods for committee selection include election by the college faculty; appointment by an elected college executive committee; a combination of elected and appointed (by the dean or college executive committee) representatives; or an elected slate significantly larger than the required committee size, thus allowing the dean or college executive committee to appoint the committee from the elected slate. Selection of the committee chair is determined in accordance with college policies,
approved by the faculty. However, given their responsibility to make a separate and independent recommendation on each case, the dean may not serve as chair of the committee.

As far as possible, each department within the college should be represented on the committee. The dean may appoint up to three tenured faculty members to serve on the college committee in order to assure appropriate representation of disciplines or very large departments, participation by members of underrepresented groups, or other critical considerations to help assure fairness of the process in both fact and perception. Appointments by the dean may not constitute more than a third of the committee's total membership.

The committee may include department heads, chairs, or department-level promotion and tenure committee members. If department heads or chairs serve on college committees, their total number must be less than that of other faculty members.

The appointments of faculty members on the committee should be staggered to assure continuity from one year's deliberation to the next. If possible, members should not serve more than two successive terms (three-year terms are typical).

The college faculty representatives to the University Promotion and Tenure Committee must attend college promotion and tenure deliberations as non-voting observers but should not participate or attempt to influence college-level recommendations.

**College Committee Evaluation of Candidate:** The committee reviews the cases of all candidates recommended by the department committee and/or head or chair as well as cases of mandatory tenure receiving negative recommendations by both a department committee and a head or chair.

The purposes of the review are to verify that the department recommendations for promotion and/or tenure are consistent with the evidence, reflect college-wide standards, and conform to the college's expectations of the candidate's future success.

After the review, the committee votes and writes a recommendation letter for each candidate that summarizes its evaluation, including the division of the vote. If the recommendation for promotion and/or tenure varies from that received from the department committee or the department head or chair, reasons for that variance must be specified, including references to the “Expectations and Indicators” section of the relevant department's promotion and/or tenure guidelines. In the absence of a unanimous recommendation by the committee, the division of the vote must be explained. A minority letter may be attached to the committee's recommendation letter. All letters must be sent to the dean and become part of the dossier.

If the committee includes department heads, chairs, or department-level promotion and tenure committee members, none of these members may vote on cases from their departments, since each has already had an opportunity to vote or make a recommendation on those candidates. The dean does not vote on committee recommendations.
The college committee may ask the department head or chair, the candidate, and/or a representative(s) of the department committee to appear before the college committee to present additional information or clarify recommendations.

The dean may participate in committee discussions and serve in an advisory capacity to the committee to ensure compliance with college and university procedures and fair and equitable treatment of candidates. However, subsequent to the discussions with the dean, the committee must discuss the merits of the candidates, frame its recommendations, and take the final vote without the dean or other college-level personnel in attendance and without influence by the dean.

**Dean's Evaluation of Candidate:** The dean reviews the cases of all candidates considered by the college committee. The purpose of the dean’s review is to verify that the department and college committee recommendations for promotion and/or tenure are consistent with the evidence, reflect college-wide standards, and conform to the college’s expectations of the candidate’s future success.

The dean writes a separate recommendation letter for every case sent to the provost. If the dean’s recommendation for promotion and/or tenure varies from the college committee’s, reasons for that variance must be specified, including references to the “Expectations and Indicators” section of the relevant department’s promotion and/or tenure guidelines. In instances of concurrence, the dean’s letter may include additional points not raised in earlier evaluations. The dean will share their letter with the committee and add it to the dossier.

For every promotion and/or tenure case (whether mandatory tenure, non-mandatory-year tenure, and/or promotion), if either the college committee’s or the dean’s recommendation is positive, the dossier is sent to the provost. If the college committee’s recommendation is negative and the dean concurs, the dean declares a final decision and no further review is carried out.

The dossiers that the dean sends to the provost must be accompanied by a statement describing the formation and procedures of the college committee and a summary of the number of candidates considered by the committee in each category (mandatory tenure, non-mandatory-year tenure, and promotion at each rank). The division of the college committee’s vote must be added to the dossier, but otherwise remains confidential.

### 3.4.4.3 University Evaluation for Promotion and/or Tenure

While the details of the procedures followed by the University Promotion and Tenure Committee are maintained on the provost’s website (see “Promotion and/or Tenure Procedures for University Committee Deliberations and Notifications”), those procedures are derived from the policies and standards presented below and must conform to the Faculty Handbook.

**University Promotion and Tenure Committee Composition:** The University Promotion and Tenure Committee is appointed and chaired by the provost. The committee is composed of the
academic deans, a tenured faculty representative from each of the colleges, a tenured faculty member-at-large, and the provost. The faculty subcommittee of the University Promotion and Tenure Committee includes the college faculty representatives plus the faculty member-at-large. The provost, who is a non-voting member, chairs both the full committee and faculty subcommittee. The vice provost for faculty affairs serves as resource and scribe for committee deliberations.

Significant elements of faculty choice must be part of the selection of the faculty subcommittee; therefore, each college faculty, through means deemed suitable by them, nominates two faculty members for each vacancy, from which the provost selects one. The Faculty Senate nominates two faculty members for the at-large appointment, from which the provost selects one. The selection of the faculty members should be based on demonstrated professional excellence. The faculty members of the committee hold rotating terms of three years. Regardless of the size of the committee, the faculty must always have a majority of the potential votes.

Guidelines for submission of candidates’ dossiers are available on the provost’s website.

**University Promotion and Tenure Committee Evaluation of Candidate:** The committee reviews the qualifications of each candidate recommended for promotion and/or tenure by the college committee or the dean.

The purposes of the review are to verify that the recommendations for promotion and/or tenure are consistent with the evidence, reflect university-wide standards, and conform to the university's expectations of the candidate’s future success.

The faculty sub-committee initially discusses all the cases with the provost in attendance. Committee members provide a brief summary of the cases from their college to begin the committee discussion, though they are not expected to champion or defend cases. Subsequent to the discussions with the provost, the faculty subcommittee must be given a period of time to discuss the cases in the absence of the provost and all other university-level personnel. The provost then rejoins the subcommittee and asks the faculty to rate the cases in order to identify those they would like to discuss further with the deans. Deans are informed of which cases the faculty subcommittee would like to discuss further and the particular concerns the subcommittee has in each case.

The full committee then convenes. The deans present information based on faculty subcommittee concerns. The committee then rates the cases to clarify which cases require further discussion. Deans abstain from rating the candidates in their colleges, as the dean’s statement, which is included in the dossier, serves as their estimation of the case’s strength. The provost shares the result of the rating, after which the full committee discusses the cases. The committee adjourns and reflects upon the group discussion.

Upon reconvening, the provost invites committee members to comment upon any case. The full committee then votes, with deans abstaining from voting on candidates from their colleges. Similarly, faculty members serving on the committee do not vote on any case on which they previously voted.
The vote must occur through secret ballot. Though the provost shares the result of the vote with the committee, committee members must keep the results confidential. The majority vote of the committee reflects either a positive or negative recommendation to the provost. A tie vote is considered a negative recommendation.

If the recommendation for promotion and/or tenure varies from that received from the department or college, reasons for that variance must be specified, including references to the “Expectations and Indicators” section of the relevant department's promotion and/or tenure guidelines.

Whether positive or negative, the provost forwards the committee’s recommendation to the president, including the division of the vote.

**Provost’s and President’s Evaluation of Candidates:** The provost makes recommendations to the president, informing the committee of those recommendations. If the provost's recommendation for promotion and/or tenure on any case varies from that received from the University Promotion and Tenure Committee, reasons for that variance must be specified, including references to the “Expectations and Indicators” section of the relevant department's promotion and/or tenure guidelines.

The president makes recommendations for promotion and/or tenure to the Board of Visitors from among those candidates reported by the provost, with the Board of Visitors being responsible for the final decision.

### 3.4.4.4 Candidate Notification

As a promotion and/or tenure case proceeds, the candidate must be notified in writing of the recommendations made by each committee and administrator.

Any negative recommendations, whether by a committee or administrator, must include all substantive reasons for that recommendation, including references to the “Expectations and Indicators” section of the relevant promotion and/or tenure guidelines, as well as options for appeal. While notification letters may include excerpts from committee or administrator letters, they cannot include the results of any votes, the names of external evaluators, or statements from their evaluations.

The department head or chair notifies the candidate of the department committee's and the head's or chair's recommendations to the college. The dean notifies the candidate of the college committee's and the dean’s recommendations to the provost. The provost notifies the candidate of the University Promotion and Tenure Committee's and the provost’s recommendations to the president. Notification will take place within 10 university business days of the completion of the committee's and administrator's deliberations.

In cases with a negative recommendation from the provost, the University Promotion and Tenure Committee, or both, the provost does not forward the case to the president until the candidate has had time to appeal.
In cases with a final positive recommendation by the president, the provost notifies the candidate in writing that their case has been recommended by the president to the board of visitors for approval. In cases with a final negative recommendation by the president, the provost notifies the appropriate dean, who informs the candidate in writing of the reasons for the decision.

3.4.5 General Guidelines for Appeals of Decisions on Reappointment, Promotion, and/or Tenure

A faculty member who is notified of a negative decision following evaluation for a term reappointment during the probationary period, for a tenured appointment, or for promotion may appeal for review of the decision under conditions and procedures specified in this section. The appellant has a right to an explanation of the reasons for the denial. An appeal must be filed in writing within 10 university business days of formal notification of the decision, which shall explain the appeal procedures.

An appeal can be based on the following claims only: department criteria established in the "Expectations and Indicators" section of the relevant department’s promotion and/or tenure guidelines were not appropriately applied; material from the dossier was unavailable to or disregarded by reviewers through no fault of the candidate; or information in the dossier was not considered in a fair and objective manner.

Additionally, faculty have the option to grieve procedural violations of the promotion and tenure process—including violations of the appeal process presented in this section—after a negative decision on an appeal or instead of filing an appeal in the first place. Since the grievance procedures allow the grievant to state both the grievance they believe they have experienced and the relief they seek, it has a wider range of possible outcomes than the appeal process. However, because it is a slower process that may not be completed until the promotion and/or tenure cases in a given year have been decided, and because faulty cannot grieve "items falling within the jurisdiction of other university policies and procedures," a grievance should be thought of as a means for faculty to seek an outcome they cannot seek through the appeal process. The grievance process is described in chapter three, "Faculty Grievance Policy and Procedures."

Administrators and committees hearing an appeal must limit the scope of their recommendations to the grounds presented above: in particular, they must not substitute their own judgment on the merits of the case for that of the body or individual responsible for the decision under appeal. The recommendations should address the allegations in the appeal with specificity and cite appropriate evidence.

A faculty member can appeal the decision at more than one level. There is no appeal of the president’s recommendation to the Board of Visitors or the board’s final decision.

Appeals should be resolved as quickly as possible without compromising fairness or thoroughness of review. Whenever possible, the appeal should be resolved in time to accommodate the first meeting of the Board of Visitors in the fall semester.
A faculty member with questions or concerns about the appeal process or who believes that the procedures described in this section have been improperly followed may, at any point, seek advice from the Faculty Senate Committee on Reconciliation.

3.4.5.1 Appeal of Probationary Reappointment Decision

Faculty members on probationary term appointments should make no presumption of reappointment. The department head or chair with the advice of the departmental personnel committee or the faculty development committee determines non-reappointment. Notice of non-reappointment is furnished according to the schedule in chapter two, “Retirement, Resignation, and Non-Reappointment.” The specific reasons for the decision are provided to the faculty member in writing.

If the decision is based primarily on evaluation of the faculty member's performance, including perceived lack of potential for further professional development, then the faculty member may appeal the decision to the dean of the college. If the dean sustains the departmental decision, the faculty member may request, through the dean, the further and independent review of the decision by the properly constituted college committee on promotion and tenure.

The faculty member presents the appeal in writing as specified in chapter three, “Appeals of Decisions on Reappointment, Tenure, or Promotion.” The faculty member has the right to appear before the committee to present arguments. The college committee makes recommendation to the dean, who informs the faculty member of the committee’s recommendation and the dean’s subsequent decision. The dean's decision closes the appeal process, unless it varies from the college committee’s recommendation, in which case the faculty member may appeal to the provost for a final decision.

3.4.5.2 Appeal of Promotion and/or Tenure Decision

Appeal of negative department or college decisions: Because all mandatory tenure cases, even those given a negative recommendation by the department committee and the head or chair, receive a full college level review, there is no appeal of a negative tenure decision at the department level.

With all non-mandatory cases, whether promotion and/or tenure, if the committee and the relevant administrator both make negative recommendations, the candidate may appeal that negative decision to the next level in the process. The faculty member has the right to appear before the committee considering the appeal and present arguments.

If either the college committee or the dean grants the appeal of a negative department decision, the case resumes normal consideration, beginning with the college committee and dean. If either the University Promotion and Tenure Committee or the provost grants the appeal of a negative college decision, the case resumes normal consideration, beginning with the University Promotion and Tenure Committee and the provost. At either the college or university level, if the committee and the relevant administrator both make negative recommendations, the appeal is denied and no further appeal is provided.
Appeal of negative university decisions: Because all recommendations from the University Promotion and Tenure Committee and the provost are forwarded to the president, candidates may appeal negative recommendations of either or both to the Faculty Review Committee. The faculty member has the right to appear before the committee to present arguments. The Faculty Review Committee investigates the case and makes a recommendation to the president.

The president’s recommendation to the Board of Visitors, and the Board of Visitors’ final decision, cannot be appealed.

Table of appeal options for promotion and/or tenure cases: The following table provides a summary of the progression of cases (whether promotion and tenure, tenure only, or promotion only) that receive negative recommendations from either a committee, administrator, or both, including appeal options. This table is for reference only.

<table>
<thead>
<tr>
<th>Decision</th>
<th>Next Step</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative recommendation by department committee and by department head or chair (all but mandatory tenure cases)</td>
<td>May appeal to college committee (through the dean)</td>
</tr>
<tr>
<td><strong>Appeal granted by the college committee and/or dean,</strong></td>
<td>Moves to college committee and dean for normal consideration of the case</td>
</tr>
<tr>
<td>Negative recommendation by department committee and by department head or chair (mandatory tenure cases only)</td>
<td>Moves to college committee and dean</td>
</tr>
<tr>
<td>Negative recommendation by department committee; positive recommendation by department head or chair</td>
<td>Moves to college committee and dean</td>
</tr>
<tr>
<td>Positive recommendation by department committee; negative recommendation by department head or chair</td>
<td>Moves to college committee and dean</td>
</tr>
<tr>
<td>Negative recommendation by college committee and dean (mandatory tenure cases only)</td>
<td>May appeal to University Promotion and Tenure Committee (through the provost)</td>
</tr>
<tr>
<td><strong>Appeal granted by the University Promotion and Tenure Committee and/or provost,</strong></td>
<td>Moves to University Promotion and Tenure Committee and provost for normal consideration of the case</td>
</tr>
<tr>
<td>Negative recommendation by college committee; positive recommendation by dean</td>
<td>Moves to University Promotion and Tenure Committee and provost</td>
</tr>
<tr>
<td>Positive recommendation by college committee; negative recommendation by dean</td>
<td>Moves to University Promotion and Tenure Committee and provost</td>
</tr>
<tr>
<td>Negative recommendation by the University Promotion and Tenure Committee and/or provost</td>
<td>May appeal to Faculty Review Committee—recommendation is advisory to the president.</td>
</tr>
<tr>
<td>Negative recommendation by president</td>
<td>No appeal</td>
</tr>
<tr>
<td>Negative decision by the Board of Visitors</td>
<td>No appeal</td>
</tr>
</tbody>
</table>

3.7.4 Valid Issues for Grievance

For this process, a grievance is defined as a complaint by a faculty member alleging a violation, misinterpretation, or incorrect application of a policy, procedure, or practice of the university that...
directly affects the grievant. Some examples of valid issues for filing a grievance are: improperly or unfairly determined personnel decisions that result in an unsatisfactory annual performance evaluation; unreasonable merit adjustment or salary level; excessive teaching load/work assignments; violations of promotion and tenure procedures, including the appeal process (see appeal process in chapter three, “Appeals of Decisions on Reappointment, Tenure, or Promotion”); reprisals; substantive error in the application of policy; and matters relating to academic freedom.

**Issues not open to grievance:** While most faculty disputes with the university administration may be dealt with by this grievance policy, the following issues may not be made the subject of a grievance: determination of policy appropriately promulgated by the university administration or the university governance system; those items falling within the jurisdiction of other university policies and procedures (for example, complaints of unlawful discrimination or harassment, or an appeal of a promotion and/or tenure decision based on the grounds presented in chapter three, “General Guidelines for Appeals of Decisions on Reappointment, Promotion and/or Tenure”); the contents of personnel policies, procedures, rules, regulations, ordinances, and statutes; the routine assignment of university resources (e.g., space, operating funds, parking, etc.); usual actions taken, or recommendations made, by administrators or committee members acting in an official capacity in the grievance process; termination of appointment by removal for just cause, non-reappointment, or abolition of position; or allegations of misconduct in scholarly activities.

**1.2.5.2 Faculty Review Committee**

The functions of the Faculty Review Committee are: to provide faculty review of faculty grievances, to evaluate procedural concerns raised by faculty serving on promotion and tenure committees, and to consider appeals in the promotion and tenure or continued appointment process when the provost does not concur with a positive recommendation from the University Committee on Promotion and Tenure (see chapter three, “Appeals of Decisions on Reappointment, Tenure, or Promotion”) or the University Committee on Promotion and Continued Appointment (see chapter four, “Appeals of Decisions on Reappointment, Continued Appointment, or Promotion”).
RESOLUTION TO REVISE CHAPTER FIVE OF THE FACULTY HANDBOOK: Employment Policies and Procedures for Non Tenure-Track Faculty

WHEREAS, faculty members on the collegiate professor track have asked for clarification of the guidelines relevant to their employment series, particularly those regarding the appropriate range of duties and expectations for promotion; and

WHEREAS, based upon the shared belief of the Faculty Senate and the Office of the Provost that a revision to the collegiate faculty sections of chapter five in the Faculty Handbook was warranted, a Commission on Faculty Affairs working group, comprised mostly of collegiate faculty, was formed for this purpose; and

WHEREAS, the working group sought to simplify and standardize procedures, clarify and update requirements, and ensure the equitable treatment of faculty while maintaining Virginia Tech’s high academic standards; and

WHEREAS, changes to the university’s promotion and tenure guidelines needed to be carried over to the promotion guidelines for non-tenure-track faculty; and

WHEREAS, the Commission on Faculty Affairs has periodically presented the revision to the Faculty Senate and department heads/chairs and incorporated many of the suggestions these groups have offered; and

WHEREAS, the Faculty Senate and the Office of the Provost believe that the revision, which includes clarification of the duties for faculty members on the collegiate professor track and changes to the requirements for departmental guidelines for the promotion of non-tenure-track faculty, improves upon the existing guidelines;

NOW, THEREFORE BE IT RESOLVED, that the Faculty Handbook be revised according to the text included in Appendix 1; and

BE IT FURTHER RESOLVED, that these revised guidelines will become effective beginning with faculty considered for promotion during the 2022-2023 academic year.

RECOMMENDATION:

That the Board of Visitors approve this resolution to revise chapter five of the university’s Faculty Handbook.

March 22, 2021
5.0 Employment Policies and Procedures for Non-Tenure-Track Instructional Faculty

The following policies address specific aspects of non-tenure-track instructional faculty appointments. Non-tenure-track faculty members fill critical roles in the learning, discovery, and engagement missions at Virginia Tech. They complement the qualifications and contributions of tenure-track faculty, provide access to specialized faculty resources, and allow flexibility to address programmatic needs. As valuable contributors to departmental and institutional missions, they are entitled to fair treatment and compensation, access to professional development opportunities, recognition for their accomplishments, and participation in the life of the university community.

Academic departments retain the authority to decide whether to employ non-tenure-track faculty to deliver aspects of their instructional program and will maintain Promotion Guidelines (see chapter three, “Promotion and Tenure”) that follow the university template and include all information regarding departmental procedures and expectations for reappointment, progress toward promotion, and the evaluation of non-tenure-track promotion cases. Nothing in these guidelines shall supersede or contradict the provisions of the Faculty Handbook. If a college elects to adopt guidelines that establish a college-wide standard for promotion of non-tenure-track faculty, departments may maintain a set of guidelines that interpret the college-wide standard within the context of the department’s disciplines and traditions. All guidelines will be approved by faculty (through department- and college-level governance), the college-level committee and the dean, and the provost’s office, and made available online. Revisions to these documents must also be approved by the faculty, the college, and the provost’s office.

Ordinarily a graduate or professional degree is required for appointment to one of these ranks. Appointments are made using established university search procedures. (See chapter two, “Faculty Search Processes,” and the Human Resources website.)

Tenure will not be awarded at any of these ranks and service at these ranks is excluded from the pre-tenure probationary period if the faculty member is subsequently appointed to a tenure-track position, except for visiting professors, whose full-time service may or may not be counted at the discretion of the faculty member.

In a few cases, faculty members with regular academic rank (assistant, associate, or full professor) hold non-tenure-track appointments because of unusual job responsibilities and historical lack of appropriate alternative ranks. Policies in this section also apply to those individuals.

All non-tenure-track faculty ranks provide for full- or part-time appointments.

5.1 Non-Tenure-Track Instructional Faculty Series

5.1.1 Visiting Professor

Appointment to the rank of visiting assistant, associate, or professor is for a restricted period to carry out learning, discovery, and engagement responsibilities within an academic department. Professional credentials required for the standard professorial ranks are required for appointment as a visiting assistant, associate, or professor. A visiting faculty member may not serve in such a position beyond six years. Tenure cannot be awarded to individuals in the visiting ranks.

Full-time service at this rank may or may not be counted as part of the pre-tenure probationary period if the faculty member is subsequently appointed to a tenure-track position. As with prior service credit from another institution, the decision to include all or some of the years of service from a visiting appointment is at the discretion of the faculty member. However, this decision must be
made at the time of appointment to the tenure-track position and documented as part of that initial contract.

5.1.2 Adjunct Professor

Appointment to the rank of adjunct assistant, associate, or professor is reserved for persons whose primary employment is with another agency, organization, educational institution, or with a non-instructional unit of the university. Adjunct professors are usually compensated as wage employees using the university's P14 form. Procedures for processing P14 actions are available on the Human Resources website.

Appropriate professional credentials are required for appointment as an adjunct assistant, associate, or professor. Appointments may be renewed annually. The professor of practice series titles may be used for wage adjunct faculty appointments in lieu of the adjunct assistant professor, associate professor, or professor titles, if appropriate for the assignment and credentials of the individuals. (See “Professor of Practice Series.”)

Adjunct faculty must present credentials appropriate to the level of the course they are teaching. It is the responsibility of the department to verify documentation of appropriate credentials for adjunct faculty members prior to the start of the course. (See chapter two, “Faculty Credentialing Guidelines,” or the provost’s website.)

If deemed qualified and appropriate by the host department, authorization for an adjunct faculty member to serve as principal investigator on a sponsored project may be requested. The department, with the approval of the dean, submits a written request for such authorization to the Office of the Vice President for Research and Innovation.

Wage adjunct faculty members do not typically submit an annual faculty activity report or have an annual evaluation because their employment is temporary. Although wage adjunct faculty may be hired repeatedly to teach a course or courses, they are not considered to be continuing faculty for the purposes of evaluation. Per course stipends paid to wage adjunct faculty are not fixed university-wide, but rather are determined on a departmental basis. Payments typically reflect the experience and credentials of the wage adjunct faculty member, the level of demand (market) for the necessary expertise, and general salary levels in the discipline.

5.1.3 Professor of Practice Series

For disciplines where professional preparation of students is a major goal, the involvement of experienced practitioners in teaching the skills and values of the profession, overseeing internships and project experiences, and career advising, for example, are a vital aspect of a successful program. Professional programs often have a deep commitment to the on-going continuing education of practitioners in the field, resulting in a greater commitment to delivery of outreach programs than is typical of a tenure-track appointment outside of Extension. Programs in the arts may wish to attract resident artists or performers for a period of time to contribute to the program. The professor of practice rank series may be appropriate in these and other roles that typically do not reflect the same range of responsibilities required for tenure-track faculty members.

The professor of practice series provides for non-tenure-track faculty appointments for individuals who bring specialized expertise to the instructional programs of the university, thereby complementing the qualifications and contributions of tenure-track faculty. (These rank titles may also be used for wage [P14] appointments in lieu of adjunct assistant, associate, or professor, if appropriate for the assignment and credentials of the individual.) Individuals appointed to these ranks are expected to be successful and effective professionals in a given field. They must be effective
teachers of the profession or discipline and they are expected to be able to understand and evaluate the research that applies to their field and teach it to students. While professor of practice faculty members may conduct research and present their findings in professional venues, there are no expectations for an extensive research program as is typical of tenure-track faculty appointments.

Professor of practice faculty members are expected to remain active in their professions in ways that contribute to their assignment—teaching, consulting, or outreach, serving in technical and professional societies and associations, and similar activities. Where appropriate to their assignment, they may interact with graduate or professional students and interns and serve on graduate committees. To chair a graduate committee, professors of practice must have a terminal degree, active involvement in research, and the approval of the academic unit and the graduate school. They may also be expected to serve on departmental, college, or university committees as contributing members of their departments and the broader university community.

Individuals appointed to a professor of practice rank must have a graduate or professional degree in the discipline (or a related discipline), professional certification(s) if relevant, and/or significant professional experience. Any appointment without the relevant terminal degree in the field must be certified by the department as appropriately credentialed for the faculty member’s particular instructional assignment in accordance with guidelines for regional accreditation and university policy and procedures. Documentation supporting alternative credentials certification is required. Further information regarding appropriate credentials for the teaching faculty is found in chapter two, “Faculty Credentialing Guidelines,” and on the provost’s website.

A record of significant professional achievement is expected for appointment at the associate professor or professor level; initial appointments at such ranks require approval of the appropriate departmental committee and head or chair. Appointment to one of these ranks may be from one to five years and is renewable without limit.

Promotion within these ranks may be pursued through procedures outlined in this section.

Assistant Professor of Practice: Persons appointed at this rank have a graduate or professional degree in the discipline (or a related discipline), professional certification(s) if relevant, and/or significant professional experience. Experience and a demonstrated competence in practice of the profession are expected. Credentials must be relevant to the field and type of assignment.

Associate Professor of Practice: Persons appointed at the associate professor of practice rank have a graduate or professional degree in the discipline (or a related discipline), professional certification(s) if relevant, and/or significant professional experience. Credentials for appointment or promotion to this rank must document a record of significant professional experience and accomplishments relevant to the field and type of assignment.

Professor of Practice: Professor of practice is the capstone rank in the series. Appointment to this rank denotes distinguished professional achievement, and regional, national, or international prominence in the field. Credentials for appointment or promotion to this rank must document a record of significant professional experience and accomplishments relevant to the field and type of assignment. External validation of such accomplishments and leadership in the field is expected at the time of appointment or promotion.

5.1.4 Clinical Faculty Series

General college faculty members with responsibilities primarily in instruction and/or service in a clinical setting, such as veterinary medicine are considered clinical faculty. The following clinical faculty appointments are intended to promote and retain clinical educators and to complement the
clinical activities of the university. The clinical faculty track provides for faculty appointments to individuals whose primary responsibilities are in clinical settings and in the instructional programs. While clinical faculty may conduct clinical research and present their findings in professional venues, there are no expectations for an extensive research program as is typical of tenure-track faculty appointments. The clinical faculty ranks include:

*Clinical Instructor:* Persons appointed to this rank must have the appropriate professional degree. Preference is given to individuals eligible for, or certified by, the most appropriate specialty college or organization recognized by the profession. Appointments at this rank are typically for one year and are renewable.

The clinical professor series is designed for clinical faculty members who have extended appointments and who are expected to interact with graduate or professional students, residents and interns, serving on committees or supervising their training. Appointment to one of these ranks may be from one to five years and is renewable without limit. Usually a national search is conducted for appointment at one of these ranks (or an approved exemption sought for exceptional skills or similar justification).

*Clinical Assistant Professor:* Persons appointed to this rank must have the appropriate professional degree and eligibility for, or certification by, the most appropriate specialty college recognized by the professional organization. Credentials shall be consistent with those for appointment to assistant professor, with an expectation for primary commitment to the instructional and clinical teaching setting.

*Clinical Associate Professor:* Persons appointed to this rank must have the appropriate professional degree and be a diplomate in the appropriate specialty college recognized by their professional organization. Credentials shall be consistent with those for appointment to associate professor, with an emphasis on clinical accomplishments.

*Clinical Professor:* Persons appointed to this rank must have the appropriate professional degree and be a diplomate in the most appropriate specialty college recognized by their professional organization. Credentials shall be consistent with those for appointment to professor, with an emphasis on clinical accomplishments.

Further detail on the duties and responsibilities of these ranks, criteria and the process for promotion, and the terms and conditions of employment for clinical faculty are established by the respective academic departments and approved by an appropriate college-level committee and the dean.

### 5.1.5 Collegiate Faculty Series

**Description of Collegiate Faculty Series**

The primary purpose of the collegiate professor series is to provide departments the opportunity to employ faculty whose principal focus is on excellence in instruction, including teaching, pedagogy, and curricular reform. While collegiate faculty also have scholarship and service roles as laid out below, the extent of a collegiate faculty member's scholarly and service obligations will be balanced against their primary responsibility to focus on excellence in instruction. Collegiate faculty are expected to remain active in their disciplines in ways that contribute to their assignment. The following teaching, scholarship, and service parameters apply to collegiate faculty:

**Teaching:** The instructional involvement of collegiate professors can include but is not limited to classroom and online teaching, curricular updates, course transformations, and the adoption/integration of innovative and inclusive pedagogy. Working in collaboration with the
department’s other faculty, collegiate faculty may take a lead role in enhancing the curricula and promoting teaching excellence and must have a major commitment to the instructional missions of the department. Collegiate faculty may teach graduate courses.

**Scholarship:** Scholarship—broadly defined at Virginia Tech as the discovery, transmission, and/or application of knowledge—takes many forms, including but not limited to research, creative activity, and extension activity. Collegiate faculty will engage in the scholarship of teaching and learning and/or disciplinary topics and present the results in a forum or manner consistent with their assignment. While one collegiate faculty member may have an extensive disciplinary research assignment and be expected to present findings in professional venues, another may be expected to develop curricular innovations and present them for local consideration or adoption. Examples of scholarship include but are not limited to designing or participating in training or professional development grants; presenting research at regional, state, national, or international conferences; and publishing research in refereed scholarly and/or practitioner journals. Though some scholarship is expected of all collegiate faculty, there are no expectations that they will conduct the extensive research programs typical of tenure-track faculty appointments.

**Service:** Collegiate faculty members have significant roles in the governance, development, and vitality of the university and academic professions and may be expected to serve on departmental, college, or university committees; engage in outreach or extension activities; and serve in technical and professional societies and associations and similar activities.

At the time of their appointment or reappointment, given the variability of collegiate faculty assignments, contractual details outlined in the Terms of Faculty Offer (TOFO) will be supplemented by a written work assignment negotiated between the faculty member and the department head or chair.

**Initial Appointment Within the Series**

Initial appointment at the rank of Collegiate Assistant Professor requires experience and demonstrated competence in teaching and the potential for professional and/or scholarly achievement appropriate for the field and assignment. This is a three-year appointment.

Initial appointment at the rank of Collegiate Associate Professor requires evidence that a candidate has significant instructional experience and professional and/or scholarly achievements relevant to the field and type of assignment. This is a five-year appointment.

Initial appointment at the rank of Collegiate Professor, the capstone rank in the series, requires evidence of distinguished professional achievement; regional, national, or international prominence in the field; and significant instructional experience and scholarly accomplishments relevant to the field and type of assignment. This is a seven-year appointment.

Individuals appointed to any collegiate professor rank must have a terminal graduate or professional degree in the discipline (or a related discipline); professional certification(s), if relevant; and must be certified by the department as appropriately credentialed for their instructional assignment in accordance with guidelines for regional accreditation and university policy and procedures. Further information regarding appropriate credentials for the teaching faculty is found in chapter two, “Faculty Credentialing Guidelines,” and on the provost’s website.

All appointments are renewable without limit.

**Promotion Expectations Particular to the Series**

After five full years in rank, collegiate faculty are eligible for promotion. While a faculty member may request promotion prior to serving five years in rank, their dossier must provide clear evidence that they have met the criteria for promotion.
Positive evaluations of a faculty member’s accomplishments are required for promotion and may be provided by reviewers who are internal to the department, external to the department, or external to Virginia Tech, depending upon the nature of the faculty member’s assignment and the Promotion Guidelines of the department.

Given that promotion is not mandatory, collegiate faculty are obligated to inform the department head or chair of their intent to apply for promotion at least one year prior to application.

**General expectations for promotion:** Promotion to the rank of *Collegiate Associate Professor* requires evidence that a candidate’s teaching, including their pedagogy and curricular reform, has had impact within the department and has the potential for greater impact in the future; that a candidate’s scholarship has had impact locally, regionally, nationally, or internationally, depending on their assignment; and that they have made significant contributions to service.

Promotion to the rank of *Collegiate Professor* denotes distinguished professional and/or scholarly achievement and requires evidence that a candidate’s potential as a teacher, including their pedagogy and curricular reform, has been reached; that their scholarship has had impact regionally, nationally, or internationally, depending on their assignment; and that they have continued to make significant contributions to service.

A collegiate professor in a regular position who receives notice of non-reappointment may request a review of the decision by the college dean. If the dean sustains the non-reappointment decision, the faculty member may request, through the dean, a further and independent review of the decision by the properly constituted college committee on promotion and tenure in accordance with appropriate procedures. If the committee concurs with the dean’s decision, the decision is final. The dean notifies the faculty member in writing of the reasons for the committee’s decision and no further appeal is provided. If the committee’s recommendation varies from the dean’s, the case is automatically sent to the provost for review. The provost’s decision is final.

### 5.1.6 Instructor Series

The responsibilities of a person appointed to one of the instructor ranks in an academic department are focused on undergraduate education, with minimal or no expectation for development of an independent program of research or scholarship. A master’s degree is the usual minimum educational credential for an appointment to the instructor ranks, and generally a minimum of 18 graduate credits teaching in the discipline is required to meet accreditation standards. Further information regarding appropriate credentials for the teaching faculty is found in chapter two, “Faculty Credentialing Guidelines,” and on the provost’s website. Instructors with distinctive assignments and work schedules will have these responsibilities conveyed in the terms of faculty offer letter at the time of appointment.

While initial appointment is typically at the entry rank, prior experience may be considered for a recommendation of appointment at a higher rank with the approval of the appropriate departmental committee and head or chair. Up to three years of similar instructional service at another accredited American four-year college or university may be counted toward the designated period required prior to review for promotion in rank.

Faculty members within the instructor ranks may not chair a graduate committee.

**Instructor:** The instructor rank is the initial rank for appointment of a full- or part-time faculty member. Primary responsibilities are usually to the instructional program, but assignments vary depending on the faculty member’s expertise and experience and departmental needs. Typically, they include teaching undergraduate courses, advising students, developing or revising courses and
curricula, and fulfilling other instructional, administrative, or service responsibilities. Appointment at this rank consists of a series of one- or two-year renewable appointments with a minimum of five years of completed service before consideration for promotion.

**Advanced Instructor.** Consideration for promotion to the rank of advanced instructor may be requested by the instructor or recommended by the department based on excellence in instructional responsibilities and significant evidence of related professional growth and development. Mentoring colleagues or graduate teaching assistants, student advising, course or curriculum development, or exemplary service or outreach are examples of ways in which instructors can make valuable contributions to the instructional programs in a department. Advanced instructors are expected to demonstrate mastery in teaching with significant impact on student learning and the department’s undergraduate programs. Scholarship and publication are not typically an assigned responsibility of instructor positions, but such accomplishments may be considered as part of the evaluation for promotion. Promotion to the advanced instructor rank is generally accompanied by a renewable three-year contract.

A minimum of five years of completed service at the advanced instructor rank is required before consideration for promotion to senior instructor.

**Senior Instructor.** Senior instructor is the capstone rank in the instructor series and promotion to this rank denotes exemplary instruction, demonstrated continued professional development, and significant contributions to undergraduate education. In addition to teaching courses, senior instructors may have considerable responsibility in mentoring colleagues or graduate teaching assistants, overseeing course development or special instructional initiatives, student advising, or other responsibilities reflecting their role as instructional leaders. Promotion to the rank of senior instructor is generally accompanied by a renewable five-year contract.

### 5.2.2 Reappointment

Non-tenure-track faculty members on restricted contracts whose appointments will be continued are issued a reappointment contract specifying the new ending date for their appointment. Reappointments typically occur on the anniversary of the hire date or are realigned to coincide with the academic year or other relevant appointment cycle. The practice of issuing repeated one-year restricted contracts for an individual faculty member over many years is explicitly discouraged, as it can be exploitative over an extended time.

Therefore, if a faculty member is to be reappointed into a restricted position when the faculty member has spent the preceding five years on restricted contracts, approval must be requested from the provost’s office. The request should be supported by documentation demonstrating why the position cannot readily be converted to a regular appointment.

Reappointments for faculty members on regular contracts are usually effective July 1 (for calendar year appointments) or August 10 (for academic year appointments). Notice of non-reappointment is in accordance with periods identified in chapter two, “Retirement, Resignation, and Non-Reappointment.”

### 5.2.4 Promotion Guidelines for Non-Tenure-Track Faculty

Non-tenure-track faculty are eligible for promotion in accordance with guidelines and procedures maintained here and in each department’s Promotion Guidelines. (See chapter three, “Promotion and Tenure,” for information regarding the content of, and approval process for, departmental guidelines.)

Promotion in rank for non-tenure-track faculty is not a requirement of continued employment or
an entitlement for years of service without evidence of merit, continued professional development, and contributions in the assigned roles. Positive evaluations of a faculty member’s accomplishments are required for promotion and may be provided by reviewers who are internal to the department, external to the department, or external to Virginia Tech, depending upon the faculty member’s rank, the nature of their assignment, and the Promotion Guidelines of the department.

Faculty members must be in a regular or restricted appointment to be considered for promotion. (See chapter five, “Reappointment,” for information regarding promotion for faculty members on restricted appointment). An approved promotion in rank is recognized by a change in title, increasing length of appointment contract, and a base salary adjustment as identified in the annual faculty compensation plan approved by the Board of Visitors.

**Progress reviews (for Clinical and Collegiate Faculty only):** Reviews are substantive and thorough. At minimum, departmental committees must review the faculty member’s relevant annual activity reports, peer evaluations of teaching, and authored materials. It is strongly suggested that faculty use the series-appropriate promotion dossier format (available on the provost’s website) to organize and present information for review. The reviews should analyze the faculty member’s progress toward promotion and offer guidance regarding future activities and plans. All reviews must be in writing, with the faculty member acknowledging receipt by signing and returning a copy for their departmental file. Whenever possible, reviews should be performed by promotion and tenure committees or other equivalent standing committees.

Since work assignments of faculty can change over time, the committee will also determine if assignments conform to the expectations for the appropriate series. Committees are expected to recommend adjustments in work assignments when the nature and/or amount of work faculty have been assigned hinders their opportunity for promotion. These recommendations will be included in the written evaluation and must be considered by department heads and chairs during annual evaluations and when renewing contracts.

Departments must schedule at least one review of every clinical or collegiate faculty member during the term of each multi-year contract. However, after two reviews, faculty who do not intend to seek promotion or who have reached the capstone level of their series can decline the review. Beyond the normal schedule of reviews, faculty have the right to request a review in order to determine if their assignment still conforms to the expectations of their series.

**Promotion process:** The responsibilities of non-tenure-track faculty are tailored to the needs of their departments, and candidates for promotion are not expected to have equal levels of commitment or equal responsibilities in teaching, scholarship, and service. Therefore, evaluators must take unique features of every faculty member’s department, discipline, and work assignment into account. Thus, as part of their Promotion Guidelines, each department is required to have an “Expectations and Indicators for Promotion” section that accounts for disciplinary and programmatic differences unique to and within the department and specifies what is required of their non-tenure-track faculty for promotion. These distinctions are best clarified at the department level and must be adhered to by evaluators at every stage of the promotion process. Expectations and indicators will be selected with the participation of and approved by faculty in the department through department- and college-level governance. Departments should carefully assess and state the overall standards of professional performance and contribution they consider minimally acceptable for the conferral of promotion. In colleges that adopt a college-wide set of Promotion Guidelines, the “Expectations and Indicators for Promotion” section will account for differences within and across departments, schools, and ranks.

Promotion candidates will be evaluated according to the expectations and indicators in effect at the time of their application for promotion.
Consideration for promotion in rank requires preparation of a dossier. Dossier templates for Instructors, Clinical Faculty, Collegiate Faculty, and Professors of Practice are available on the provost’s website. A cover page is also required and available from the same website. The department head or chair, or the department committee, are responsible for ensuring that the dossier conforms to the appropriate format. Among other elements, the dossier includes the candidate’s statement; documentation of performance in the areas of teaching, scholarship, service, and other activities relevant to the candidate’s assignment; and a list of work under review or in progress. The dossier is completed by the addition of letters of evaluation (internal or external) and recommendation statements as the dossier is reviewed at the department and college levels. Colleges and departments may request supplemental materials.

Progress reviews for clinical and collegiate faculty and promotion evaluation of all non-tenure-track faculty are carried out by standing committees on which faculty form the majority, such as promotion and tenure committees or executive/personnel committees. Given the wide variation in representation of non-tenure-track appointments, some latitude is provided in the nature and make up of department and college committees. For example, in departments with significant numbers of instructors, the committee charged with reviews of instructor promotions would consist of majority representation of advanced and senior instructors. In departments with very few such appointments, the existing departmental promotion and tenure committee may review the dossier(s) and make recommendations. Similarly, at the college level either a special committee may be formed to review promotions of non-tenure-track faculty with majority representation of those in the advanced level of such ranks, or the existing promotion and tenure committees may be assigned such review and recommendation responsibilities. While the procedures vary due to practical issues and varying numbers, they should be included in departmental Promotion Guidelines and adhered to for consistency and fair treatment of all candidates. A faculty member may not serve on any committee that is evaluating a spouse, family member, or other individual with whom the faculty member has a close personal relationship. (See chapter two, “Conflicts of Interest.”)

Faculty being considered for promotion have their dossiers reviewed at as many as three levels: by an appropriately charged department committee and the department head or chair; by an appropriately charged college committee and the dean; and by the provost.

The department head or chair and dean make separate recommendations to the subsequent review levels. A positive recommendation from either or both the departmental committee and the department head or chair advances the dossier for promotion to the college committee level. Similarly, at the college level, a positive recommendation from either or both the college committee and the dean results in advancement of the recommendation to consideration by the provost.

The provost reviews the recommendations from departments and colleges and makes recommendations to the president; the president makes recommendations to The Board of Visitors, and the board makes the final decision.

Given that promotion decisions do not carry the same “up or out” consequences associated with tenure, a negative recommendation on a promotion request need not lead to the termination of employment. Indeed, a faculty member may remain at the initial rank as long as their performance warrants continued employment and serves departmental needs.

### 5.2.4.1 Candidate Notification

As a promotion case proceeds, the candidate must be notified in writing of the recommendations made by each committee and administrator. Any negative recommendations, whether by a committee or administrator, must include all substantive reasons for that recommendation,
including references to the relevant “Expectations and Indicators for Promotion” section of the Promotion Guidelines, as well as options for appeal. While notification letters may include excerpts from committee or administrator letters, they cannot include the results of any votes, the names of evaluators, or statements from their evaluations.

The department head or chair notifies the candidate of the department committee’s and the head’s or chair’s recommendations to the college. The dean notifies the candidate of the college committee’s and the dean’s recommendations to the provost. The provost notifies the candidate of the provost’s recommendations to the president. In cases with a final positive recommendation by the president, the provost notifies the candidate in writing that their case has been recommended by the president to the Board of Visitors for approval. In cases with a negative final recommendation by the president, the provost notifies the appropriate dean, who informs the candidate in writing of the reasons for the decision.

All notifications will take place within 10 university business days of the completion of the committee’s and administrator’s deliberations.

5.2.5 Appeals of Decisions on Promotion

Following a negative recommendation by both the department committee and the head or chair, the decision may be appealed to the college committee based on the following claims only: department criteria in the relevant “Expectations and Indicators for Promotion” section were not appropriately applied; material from the dossier was unavailable to or disregarded by reviewers through no fault of the candidate; or information in the dossier was not considered in a fair and objective manner. The appeal must be filed within 10 university business days of official notification of the promotion decision. If either the college committee or the dean grants the appeal of a negative department decision, the case resumes normal consideration, beginning with the college committee and dean. A negative recommendation at the college level or by the provost cannot be appealed.

Additionally, faculty have the option to grieve procedural violations of the promotion process—including violations of the appeal process presented in this section—after a negative decision on an appeal or instead of filing an appeal in the first place. Since the grievance procedures allow the grievant to state both the grievance they believe they have experienced and the relief they seek, it has a wider range of possible outcomes than the appeal process. However, because it is a slower process that would likely not be completed until the promotion cases in a given year have been decided, and because faculty cannot grieve “items falling within the jurisdiction of other university policies and procedures,” a grievance should be thought of as a means for faculty to seek an outcome they cannot seek through the appeal process. The grievance process is described in chapter five, “Faculty Grievance Policy and Procedures.”

Appendix 2: Original Subsections 5.0, 5.15, 5.2.4, 5.2.4.1, and 5.2.5

5.0 Employment Policies and Procedures for Non-Tenure-Track Instructional Faculty

Non-tenure-track faculty members fill critical roles in the learning, discovery, and engagement missions at Virginia Tech. They complement the efforts and qualifications of tenure-track faculty, provide access to specialized faculty resources, and allow flexibility to address programmatic needs. As valuable contributors to departmental and institutional missions, they are entitled to fair treatment and compensation, access to professional development opportunities, recognition for their accomplishments, and participation in the life of the university community. The following policies address specific aspects of non-tenure-track instructional faculty appointments. In a few cases, faculty members with regular academic rank (assistant, associate, or professor) hold non-tenure-
track appointments because of unusual job responsibilities and historical lack of appropriate alternative ranks. Policies in this section also apply to those individuals.

Ordinarily a graduate or professional degree is required for appointment to one of these ranks. Appointments are made using established university search procedures. (See chapter two, “Faculty Search Procedures,” and the Human Resources website.)

Academic departments retain the authority and responsibility to decide whether to employ non-tenure-track faculty members to deliver aspects of their instructional program. An appropriate departmental committee approves the departmental policies and practices related to the use of non-tenure-track rank

5.1.5 Collegiate Professor Ranks

Academic departments retain the authority and responsibility to make decisions about whether to employ collegiate professors. Departmental policies and practices related to the use of non-tenure-track ranks must be approved by an appropriate standing committee in the department, such as a promotion and tenure or executive/personnel committee, the department head or chair, and dean.

Collegiate professors must have a major commitment to the instructional missions of the department. The involvement of collegiate professors can include classroom and online teaching, curricular updates, course transformations, and the adoption/integration of innovative and inclusive pedagogy. Working in collaboration with the department’s other faculty, collegiate faculty may take a lead role in enhancing the curricula and promoting teaching excellence.

The collegiate professor series provides for short- or long-term, full- or part-time, non-tenure-track faculty appointments for individuals who bring specialized expertise to the instructional programs of the university, thereby complementing the qualifications and contributions of tenure-track faculty. (These rank titles may be used for wage [P 14] appointments in lieu of adjunct assistant, associate, or professor, if appropriate for the assignment and credentials of the individual.) Individuals appointed to these ranks are expected to be successful and effective professionals in a given field. They must be effective teachers of the discipline and they are expected to be able to understand and evaluate the research that applies to their field and to teach it to students. Collegiate professor faculty members may conduct research on the scholarship of teaching and learning related to their field and/or on disciplinary topics in their field and present their findings in professional venues, but there are no expectations for an extensive research program as is typical of tenure-track faculty appointments.

Collegiate professor faculty members are expected to remain active in their disciplines/professions in ways that contribute to their assignment—teaching, consulting, or outreach, serving in technical and professional societies and associations, and similar activities. Where appropriate to their assignment, they may interact with graduate or professional students and interns, serve on graduate committees, and chair graduate advisory committees with the approval of the academic unit and the graduate school. They may also be expected to serve on departmental, college, or university committees as contributing members of their departments and the broader university community.

Collegiate professors are appointed to 3-, 5-, or 7-year contracts. Contractual details outlined in the Terms of Faculty Offer (TOFO) may be complemented with a statement of work negotiated between the faculty member and the department head.

Individuals appointed to a collegiate professor rank must have a terminal or professional degree in the discipline (or a related discipline) and professional certification(s), if relevant, and must be certified by the department as appropriately credentialed for the faculty member’s particular instructional assignment in accordance with guidelines for regional accreditation and university
policy and procedures. Further information regarding appropriate credentials for the teaching faculty is found in chapter two, "Faculty Credentialing Guidelines," and on the provost's website.

A record of significant scholarly and/or professional achievement is expected for appointment at the associate or professor level; initial appointments at such ranks require approval of the appropriate departmental committee and head or chair. Appointment to one of these ranks is for a specified number of years (see below) and is renewable without limit. Performance and promotion evaluations of collegiate professors is performed by department and college standing committees where faculty form the majority, such as a promotion and tenure committee or executive/personnel committee.

A collegiate professor in a regular position who receives notice of non-reappointment may request a review of the decision by the college dean. If the dean sustains the non-reappointment decision, the faculty member may request, through the dean, a further and independent review of the decision by the properly constituted college committee on promotion and tenure in accordance with appropriate procedures.

Promotion within these ranks may be pursued through procedures outlined in this section. Tenure will not be awarded at any of these ranks and service at these ranks is excluded from the pre-tenure probationary period if the faculty member is subsequently appointed to a tenure-track position.

Collegiate Assistant Professor: Persons appointed at this rank have a terminal graduate or professional degree in the discipline (or a related discipline) and professional certification(s), if relevant. Experience and demonstrated competence in teaching are expected. Appointment to this rank is for three years and is renewable without limit.

Collegiate Associate Professor: Persons appointed at the collegiate associate professor rank have a terminal graduate or professional degree in the discipline (or a related discipline) and professional certification(s), if relevant. Credentials for appointment or promotion to this rank must document a record of significant instructional experience and accomplishments relevant to the field and type of assignment. Appointment to this rank is for five years and is renewable without limit.

Collegiate Professor: Collegiate professor is the capstone rank in the series. Appointment to this rank denotes distinguished professional achievement, and regional, national, or international prominence in the field. Credentials for appointment or promotion to this rank must document a record of significant instructional experience and scholarly accomplishments relevant to the field and type of assignment. External evaluation of such accomplishments and leadership in the field is expected at the time of appointment or promotion. Appointment to this rank is for seven years and is renewable without limit.

5.2.4 Promotion Guidelines for Instructors, Professors of Practice, and Clinical Faculty Ranks

Non-tenure-track faculty members are eligible for promotion in rank in accordance with guidelines established by academic departments and approved by an appropriate college-level committee and the dean. Such guidelines should outline the process and criteria for promotion in rank; they should be widely available along with other departmental and college documents related to promotion and tenure. Faculty members may be in a regular or a restricted appointment to be considered for promotion.

Promotion in rank for any non-tenure-track position is not a requirement of continued employment, or an entitlement for years of service without evidence of exceptional merit, continued professional development, and contribution in the assigned role. An approved promotion in rank is recognized by
a change in title, increasing length of appointment contract, and a base salary adjustment as identified in the annual faculty compensation plan approved by the Board of Visitors.

Consideration for promotion in rank includes preparation of a dossier using a common university format, which may be based on relevant elements of the promotion and tenure dossier format for tenure-track faculty members. Typically such a dossier includes a statement of professional direction and accomplishment, a complete curriculum vitae, and documentation of contributions associated with the instructor's appointment. These contributions can be to instructional programs or administrative and/or service responsibilities. Colleges and departments may request supplemental materials. The appropriate college committee and dean approve guidelines for dossier development and departmental policies and procedures for the promotion process. External review of credentials are required for some – but not all – promotions in non-tenure-track ranks. Requirements are outlined in the promotion and tenure guidelines listed on Promotion and Tenure page of the provost's website.

The promotion dossier is reviewed at three levels: (1) by an appropriately charged departmental committee and the department head or chair, (2) by an appropriately charged college-level committee and the dean, and (3) by the provost. The department head or chair and dean make separate recommendations to the subsequent review levels. The provost reviews college and dean recommendations and makes recommendations to the president. The Board of Visitors grants final approval.

Given the wide variation in representation of non-tenure-track instructional appointments some latitude is provided in the nature and make up of department and college committees. For example, departments with significant numbers of instructors, the committee charged with reviews would consist of majority representation of advanced and senior instructors. (or associate and clinical professors). In departments with very few such appointments, the existing departmental promotion and tenure committee may review the dossier(s) and make recommendations. Similarly, at the college level either a special committee may be formed to review promotions of non-tenure-track instructional faculty with majority representation of those in the advanced level of such ranks, or the existing promotion and tenure committees may be assigned such review and recommendation responsibilities. While the procedures vary to recognize practical issues and varying numbers, the guidelines for review should be in writing and adhered to for consistency and fair treatment of all candidates. A faculty member may not serve on any committee that is evaluating a spouse, family member, or other individual with whom the faculty member has a close personal relationship. (See chapter two, "Potential Conflicts Involving Spouses and Immediate Family Members.")

Given that promotion decisions do not carry the same “up or out” decision associated with tenure decisions, a negative recommendation on a promotion request need not translate into termination of employment. Indeed, a faculty member may remain at the initial rank as long as their performance warrants continued employment and serves departmental needs. If the promotion request is not supported on the first submission, it may not be appealed until at least a second review has taken place in a subsequent or later year.

Following the same pattern as review of tenure-track faculty members, a positive recommendation from either or both the departmental committee and the department head or chair automatically advances the dossier for promotion to the college committee level. Similarly, at the college level, a positive recommendation from either or both the college committee and the dean results in automatic advancement of the recommendation to consideration by the provost. The decision of the provost is final and cannot be appealed.
Faculty members should be provided written feedback in the case of a negative recommendation at either the department or college level so that they might improve their performance or dossiers for a later submission.

5.2.4.1 Promotion Guidelines for Collegiate Professor Ranks

Non-tenure-track faculty members are eligible for promotion in rank in accordance with guidelines established by academic departments and approved by an appropriate college-level committee and the dean. Such guidelines should outline the process and criteria for promotion in rank; they should be widely available along with other departmental and college documents related to promotion and tenure. Faculty members must be in a regular or restricted appointment to be considered for promotion. (See chapter five, “Reappointment,” for information regarding promotion for faculty members on restricted appointment).

Promotion in rank for any non-tenure-track position is not a requirement of continued employment, or an entitlement for years of service without evidence of exceptional merit, continued professional development, and contribution in the assigned role. An approved promotion in rank is recognized by a change in title, increasing length of appointment contract, and a base salary adjustment as identified in the annual faculty compensation plan approved by the Board of Visitors.

Consideration for promotion in rank includes preparation of a dossier using a common university format for collegiate professors, which may be based on relevant elements of the promotion and tenure dossier format for tenure-track faculty members. Typically such a dossier includes a statement of professional direction and accomplishment, a complete curriculum vitae, and documentation of contributions associated with the collegiate faculty's appointment. These contributions can be to instructional programs or administrative and/or service responsibilities. Colleges and departments may request supplemental materials. The appropriate college committee and dean approve guidelines for dossier development and departmental policies and procedures for the promotion process. External review of credentials is required for promotion to collegiate associate professor and professor.

The promotion dossier is reviewed at three levels: (1) by an appropriately charged departmental committee and the department head or chair, (2) by an appropriately charged college-level committee and the dean, (3) by the university promotion and tenure committee. The department head or chair and dean make separate recommendations to the subsequent review levels. The provost reviews the recommendations from the three levels and makes recommendations to the president. The Board of Visitors grants final approval.

Given the wide variation in representation of non-tenure-track collegiate faculty appointments in the various academic colleges, some latitude is provided in the nature and make up of such committees. For most departments, the existing departmental promotion and tenure committee may review the dossier(s) and make recommendations. Similarly, at the college level, the existing promotion and tenure committees may be assigned such review and recommendation responsibilities. While the procedures vary to recognize practical issues and varying numbers, the guidelines for review should be in writing and adhered to for consistency and fair treatment of all candidates. A faculty member may not serve on any committee that is evaluating a spouse, family member, or other individual with whom the faculty member has a close personal relationship. (See chapter two, “Potential Conflicts Involving Spouses and Immediate Family Members.”)

Given that promotion decisions do not carry the same “up or out” decision associated with tenure, a negative recommendation on a promotion request need not translate into termination of employment. Indeed, a faculty member may remain at the initial rank as long as their performance
warrants continued employment and serves departmental needs. If the promotion request is not supported on the first submission, it may not be appealed until at least a second review has taken place in a subsequent or later year.

Following the same pattern as review of tenure-track faculty members, a positive recommendation from either or both the departmental committee and the department head or chair automatically advances the dossier for promotion to the college committee level. Similarly, at the college level, a positive recommendation from either or both the college committee and the dean results in automatic advancement of the recommendation to consideration the university promotion and tenure committee.

The faculty member should be provided written feedback in the case of a negative recommendation at either the department, college, or university level so that they might improve their performance or dossiers for a later submission.

5.2.5 Appeals of Decisions on Promotion

Following a second negative review by both the departmental committee and department head or chair, the decision may be appealed to the college committee, but only on grounds that relevant information was not considered or that the decision was influenced by improper consideration. The appeal must be filed within 14 days of official notification. A negative recommendation from both the college and the dean ends the process. There is no appeal available when both the college committee and dean vote “no.”

Significant procedural violations may be grieved under the faculty grievance process described in chapter five, “Faculty Grievance Policy and Procedures.”
RESOLUTION TO CLARIFY PROBATIONARY REAPPOINTMENT LANGUAGE IN THE FACULTY HANDBOOK

WHEREAS, two different descriptions of the reappointment process appear in subsections 2.19.3.1 and 3.4.5.1 of the Faculty Handbook; and

WHEREAS, subsection 2.19.3.1 of the Faculty Handbook should include the schedule of notice of non-reappointment and not the process for determining reappointment; and

WHEREAS, there is currently no process in chapter 3 of the Faculty Handbook for resolving reappointment recommendations that differ between department heads and chairs and department personnel committees;

NOW, THEREFORE, BE IT RESOLVED that subsections 2.19.3.1 and 3.4.5.1 of the faculty Handbook be revised as indicated in the attached text below.

RECOMMENDATION:
That The Board of Visitors Approve the Resolution to Clarify Probationary Reappointment Language in the Faculty Handbook.

March 22, 2021
2.19.3.1 Non-Reappointment for Faculty on Tenure-Track or Continued Appointment-Track

Faculty members on probationary term appointments should make no presumption of reappointment, including reappointment with tenure. Non-reappointment may be determined by the department head or chair in consultation with the dean and with the advice of a departmental personnel committee or faculty development committee.

Faculty members on probationary term appointments that will not be renewed are given notice of non-reappointment in writing within the following time limits:

- First year of employment (one-year term appointment): February 9 of academic year or three months before end of employment year;
- Second year of employment: November 9 of the academic year or six months before end of employment year;
- Subsequent years: 12 months before end of employment year (May 9 for academic year appointments).

3.4.5.1 Probationary Reappointment

Faculty members on probationary term appointments should make no presumption of reappointment. The department head or chair with the advice of and the departmental personnel committee or the faculty development committee evaluate faculty for non-reappointment. The specific reasons for the decision are provided to the faculty member in writing, if requested. (See chapter three, 3.4.2 Pre-Tenure Probationary Period and Progress Reviews.)

If the decision is based primarily on evaluation of the faculty member's performance, including perceived lack of potential for further professional development, then the faculty member may request a review of the decision by the dean of the college. If the dean sustains the departmental decision, the faculty member may request, through the dean, the further and independent review of the decision by the properly constituted college committee on promotion and tenure.

The committee makes a recommendation on each candidate to the head or chair. If the head or chair does not concur with the committee's recommendation, or if both the head or chair and the committee recommend non-reappointment, the specific reasons for the negative recommendation(s) are provided to the faculty member in writing by the department head or chair, and there is an automatic review of the candidate's dossier by the dean. If the dean reaches a decision of non-reappointment, the faculty member is notified by the dean in writing of the decision and the specific reasons for it.

If the decision is based primarily on evaluation of the faculty member's performance, including perceived lack of potential for further professional development, then the faculty member may request a review of the decision by the dean of the college. If the dean sustains the departmental decision, the faculty member may request, through the dean, the further and independent review of the decision by the properly constituted college committee on promotion and tenure.

The faculty member may then request, through the dean, that the college committee on promotion and tenure independently review the decision. The faculty member presents the appeal in writing as specified in chapter three, “Appeals of Decisions on Reappointment, Tenure, or Promotion.” The faculty member may elect to present oral arguments to the committee. If the committee concurs with the dean's decision, the decision is final. The dean notifies the faculty member in writing of the
reasons for the committee’s decision and no further appeal is provided. If the committee’s recommendation varies from the dean’s, the case is automatically sent to the provost for review. The provost’s decision is final. The college committee makes recommendation to the dean, who informs the faculty member of the committee’s recommendation and the dean’s subsequent decision. The dean’s decision closes the appeal process, unless it is at variance with the college committee’s recommendation, in which case the faculty member may appeal to the provost for a final decision.

Notice of non-reappointment is furnished according to the schedule in chapter two, “Retirement, Resignation, and Non-Reappointment.”
RESOLUTION TO AMEND VIRGINIA TECH’S VOLUNTARY TRANSITIONAL RETIREMENT PROGRAM FOR TENURED FACULTY 
(UNIVERSITY POLICY NO. 4410)

WHEREAS, the Code of Virginia § 23-9.2:3.1 allows institutions of higher education in the commonwealth to execute retirement incentive plans for tenured faculty members who meet eligibility criteria, and

WHEREAS, the university’s colleges and departments benefit from the experience of senior faculty members, and

WHEREAS, a voluntary transitional retirement program provides flexibility to colleges, departments, and retiring faculty members as they manage the transition from full time employment to retirement, and

WHEREAS, the university’s faculty transitional retirement program, under University Policy No. 4410 Voluntary Transitional Retirement Program for Tenured Faculty was revised in April of 2017 to allow departments and retiring faculty members the opportunity to design a succession plan not to exceed three years that takes into account optimum planning for and management of the transition of teaching, student supervision, research, service, and other responsibilities, and

WHEREAS, the current voluntary transitional retirement program offers a one-year transitional appointment with no reduction in FTE or salary that is designed for faculty who are over 60 but under the age of 65 and want to retire but receive a continuation of employer medical premiums to be paid by the university until age 65; and

WHEREAS, the current voluntary transitional retirement program also offers two and three-year transitional appointments that include an FTE reduction to .50, and a corresponding reduction in salary; and

WHEREAS, the voluntary transitional program would be further enhanced through the addition of a one-year option that includes an FTE reduction to .50, and a corresponding reduction in salary; and

WHEREAS, clarification of language around the process for receive a continuation of employer medical premiums to be paid by the university until age 65 is needed.

NOW, THEREFORE BE IT RESOLVED, that University Policy No. 4410 be amended to include the revisions indicated in the attached policy and that the revisions be forwarded to the State Council of Higher Education for Virginia (SCHEV) for appropriate review and subsequent submission to the Office of the Governor; and

BE IT FURTHER RESOLVED, that the revisions will be communicated appropriately in the university’s electronic and print materials.

RECOMMENDATION:

That University Policy No. 4410 be amended to include the revisions outlined above.

March 22, 2021
1.0 Purpose

This policy outlines a program to assist the university's tenured and continued-appointment faculty in their transition from full-time active service to retirement and, in some cases, to facilitate their subsequent part-time re-employment to address staffing needs or to support research efforts.

For many prospective retirees, the loss of employer-paid medical benefits can be a significant factor in their decision to postpone retirement. In addition, part-time temporary re-employment is considered a desirable option by many faculty members who would like to utilize their professorial talents but with a reduced workload. Faculty members may assume teaching roles, mentor graduate students, conduct sponsored research, or take on other part-time responsibilities where their expertise will make a significant contribution to the employing unit. By utilizing a transitional retirement program, the university hopes to make it possible for long-term faculty to remain actively involved in the life of the university while reducing their professorial responsibilities.

1.1 Background

The Code of Virginia §23.1-1302 allows institutions of higher education in the Commonwealth to execute retirement incentive plans for tenured faculty who meet certain eligibility criteria. Any such program would be funded by institutional resources and must meet the applicable requirements as specified by the Code of Virginia and the Appropriations Act.

2.0 Policy

The Voluntary Transitional Retirement Program (VTRP) is an enhanced retirement program for eligible tenured faculty. Participation in the plan is voluntary for both the university and the faculty member. The elements of the program are discussed in greater detail below.

2.1 Program Objectives

To facilitate the transition of faculty from full-time active service to retirement by continuing to pay the employer portion of medical premiums and, if mutually agreeable, to consider those faculty for temporary work assignments in areas where their expertise may be needed.

1. Continuation of the employer portion of medical premiums paid by the university until age 65 for those who retire earlier.

2. To transition full time tenured faculty into full retirement over an established timeframe, allowing faculty to reduce their full-time commitment but not abruptly sever their ties with the university.
3. To allow succession planning for filling the vacancy that will occur once the faculty member is fully retired.

2.2 Eligibility for Participation in the Program

The VTRP can be established over a timeframe of one (VTRP-H, VTRP-1), two (VTRP-2) or three (VTRP-3) years. Eligibility for each of these timeframe is described in further detail below.

2.2.1 Eligibility for VTRP-H

Participants in the VTRP-H agree to retire by the end of one year from the commencement of the agreement. Participants in the program must:

1. be at least 60 years of age;
2. be a faculty member or administrator with tenure or a contractual right to continued employment as described in the Faculty Handbook (http://www.provost.vt.edu/faculty_affairs/faculty_handbook.html);
3. have at least 10 years of full-time service at Virginia Tech (full-time service may include periods of leave with full or partial pay, but excludes periods of leave without pay);
4. agree to withdraw from active membership in the Virginia Retirement System (VRS) (http://www.varetire.org), or Optional Retirement Plans. The university will cease making employer or employee contributions to VRS or optional retirement plans as of the date of retirement;
5. comply with any additional criteria established by the Board of Visitors;
6. voluntarily participate in the program.

2.2.2 Eligibility for VTRP-1

Participants in the VTRP-1 agree to retire by the end of one year from the commencement of the agreement. Participants in the program must:

1. be at least 60 years of age;
2. be a faculty member or administrator with tenure or a contractual right to continued employment as described in the Faculty Handbook (http://www.provost.vt.edu/faculty_affairs/faculty_handbook.html);
3. have at least 10 years of full-time service at Virginia Tech (full-time service may include periods of leave with full or partial pay, but excludes periods of leave without pay);
4. agree to withdraw from active membership in the Virginia Retirement System (VRS) (http://www.varetire.org), or Optional Retirement Plans. The university will cease making employer or employee contributions to VRS or optional retirement plans as of the date of retirement;
5. comply with any additional criteria established by the Board of Visitors;
6. voluntarily participate in the program.

2.2.3 Eligibility for VTRP-2 and VTRP-3

Participants in the VTRP-2 and VTRP-3 agree to retire by the end of two or three years (depending on the program) from the commencement of the agreement. Participants in the program must:

1. be at least 60 years of age;
2. be a faculty member or administrator with tenure or a contractual right to continued employment as
described in the Faculty Handbook (http://www.provost.vt.edu/faculty_affairs/faculty_handbook.html);

3. have at least 20 years of full-time service at Virginia Tech (full-time service may include periods of leave with full or partial pay, but excludes periods of leave without pay);

4. agree to withdraw from active membership in the Virginia Retirement System (VRS) (http://www.varetire.org/), or Optional Retirement Plans. The university will cease making employer or employee contributions to VRS or optional retirement plans as of the date of retirement;

5. comply with any additional criteria established by the Board of Visitors;

6. voluntarily participate in the program.
2.3 Major Program Elements

2.3.1 VTRP-H

The program participant agrees to retire by the end of the academic year following execution of the agreement. During the agreement, the participant would receive no FTE reduction, and would be expected to teach a standard teaching load as expected by the academic unit.

2.3.2 VTRP-1

The program participant agrees to retire at the end of the current academic year following execution of the agreement. During the agreement, the participant would receive an FTE reduction to .50, including a corresponding reduction in salary. Corresponding reductions to teaching, research, and service responsibilities would be made in consultation with the department head and dean and detailed in the participant’s agreement. Modifications to benefits under VTRP-1 are described further in section 2.3.4 below. During the agreement, the participant would receive no FTE reduction, and would be expected to teach a standard teaching load as expected by the academic unit.

2.3.1.1 Continuation of Medical Benefits to Age 65

Eligible faculty members who participate in the VTRP-1 program will be reimbursed for the equivalent of the employer’s portion of the health insurance premium until age 65 whether they opt for complete retirement or are rehired into a non-covered position. The reimbursement amount will be adjusted by Human Resources in accordance with changes in the state’s retiree health insurance rates. The request for participation in this program and for reimbursement of health care insurance premiums must be in writing. See Section 3: Procedures.

2.3.2 VTRP-2

The program participant agrees to retire from Virginia Tech within two years of the commencement of the VTRP agreement. During the agreement, the participant would receive an FTE reduction to .50, including a corresponding reduction in salary. Corresponding reductions to teaching, research, and service responsibilities would be made in consultation with the department head and dean and detailed in the participant’s agreement. Modifications to benefits under VTRP-2 and VTRP-3 are described further in section 2.3.4 below.

2.3.3 VTRP-3

The program participant agrees to retire from Virginia Tech within three years of the commencement of the VTRP agreement. During the agreement, the participant would receive an FTE reduction to .50, including a corresponding reduction in salary. Corresponding reductions to teaching, research, and service responsibilities would be made in consultation with the department head and dean and detailed in the participant’s agreement. Modifications to benefits under VTRP-2 and VTRP-3 are described further in section 2.3.4 below.

2.3.4 Benefits during VTRP-1, VTRP-2, and VTRP-3 Programs

Eligible faculty members who participate in the VTRP-2 or VTRP-3 program will receive the following continuation of benefits during their transitional appointment:

a. Health Insurance - The university will pay the employer portion of the health insurance benefits during the duration of the VTRP;
b. Retirement;
   - ORP – employer contribution will be based on the adjusted annual salary;
   - VRS – employee will continue to earn service credit;

c. Life Insurance - will be based on the adjusted annual salary;

d. Sick Leave – in accordance with plan rules;

e. Long-Term Disability – benefits based on the adjusted annual salary.

2.4 Continuation of Medical Benefits to Age 65

2.3.4.1 Benefits after VTRP-2 and VTRP-3 Programs for participants under age 65
Eligible faculty members who participate in any VTRP option and are still under the age of 65 at the conclusion of their transition program will remain eligible to continue health insurance coverage under a Virginia Tech plan. Once the employee transitions to retirement, the university will pay the monthly premiums, and the employee (retiree) will be responsible for reimbursing VT for the equivalent of the employee’s portion of the health insurance premium until age 65, whether they opt for complete retirement or are rehired into a non-covered position. The employee portion of the premium will be billed by Human Resources, and will include any increases in accordance with changes in the state’s retiree health insurance rates. The request for participation in this program and for reimbursement of health care insurance premiums must be in writing. See Section 3: Procedures.

After the conclusion of the VTRP-2 or VTRP-3 programs, if the faculty member is still under the age of 65, they will be eligible for the VTRP-1 program benefit of being reimbursed for the equivalent of the employer’s portion of the health insurance premium until age 65. The reimbursement amount will be adjusted by Human Resources in accordance with changes in the state’s retiree health insurance rates. The request for participation in this program and for reimbursement of health care insurance premiums must be in writing. See Section 3: Procedures.

2.62.5 Part-time temporary re-employment after retirement

VTRP retirees are eligible to return to non-covered employment after a designated break in service, and may be reemployed in part-time positions where their expertise and experience are best suited. The following guidelines apply to the part-time, non-covered employment for VTRP retirees:

a. The faculty member must have one calendar month break in service prior to reemployment in a non-covered position;

b. The faculty member may not return to a position that provides retirement benefits.

c. The temporary work after retirement cannot be identical to the work performed prior to retirement. Typically this requirement can be satisfied by reemployment doing part, but not all, of the prior role – for example, only conducting research or only teaching a course.

d. Any agreement for reemployment must be in writing, but may not be developed until AFTER retirement. The agreement should specify the nature and duration of the assignment and the amount of compensation. The reemployment agreement should be reevaluated every six months, or on a similar periodic cycle based on the assignment.

e. Appropriate office space (perhaps shared) and reasonable access to clerical support and departmental operating resources may be furnished. Please see Policy 4405 on emeritus appointments for further information.

2.72.6 Authority

The Board of Visitors reserves the right to modify, amend, or repeal the program.
3.0 Procedures

Eligible tenured faculty interested in applying for participation in the program must submit an application to their department head and dean. The provost or a designee must approve the application. Applications are accepted on a rolling basis, but faculty are encouraged to discuss interest in participating with their department head as early as possible to allow ample time for planning coverage of teaching and service responsibilities.

To begin the program in the fall, applications must be received in the provost’s office by the end of February.

To begin the program in the spring, applications must be received in the provost’s office by the end of August.

Faculty members have seven (7) days to revoke the agreement; participants must be given twenty-one (21) days to consider entering into this agreement; participants are advised to seek advice of an attorney. (Older Workers Protection Act, 1990)
4.0 Definitions

Active Membership -- as defined by the Virginia Retirement System, an active member works in a covered position with an employer that participates in the Virginia Retirement System (VRS) or is covered under an optional retirement plan (ORP) administered by VRS.

Non-Covered Employment -- as defined by the Virginia Retirement System, is a part-time position with a VRS-participating employer. Non-covered positions do not provide eligibility for benefits.

5.0 References

Policy 4405: Emeritus Faculty
http://www.policies.vt.edu/4405.pdf

6.0 Approval and Revisions

The Faculty Retirement Transition Program was endorsed in principle by the Employee Benefits Committee and the Commission on Faculty Affairs.

Approved August 13, 1990, by the Board of Visitors.
Approved September 17, 1990, by Senior Vice President and University Provost, E. Fred Carlisle.

• Revision 1
Information about retirement counseling programs removed. Changed specific references to TIAA to "optional retirement plans" (ORP).
Indefinite continuation of the program endorsed by the Commission on Faculty Affairs.
Approved April 26, 1993, by the Board of Visitors.

• Revision 2
Addition of link to VRS web page and minor clarifications.
Approved January 22, 1999, by Executive Vice President, Minnis E. Ridenour.

• Revision 3
Revisions to the requirements for faculty retiring from VRS to comply with Virginia Retirement System restrictions on post-retirement employment, and general updating.
Approved February 11, 2004 by the University Provost and Vice President for Academic Affairs, Mark G. McNamee.

• Revision 4
September 1, 2006 – Technical revision to change name from Personnel Services to Human Resources

• Revision 5

- Revision 6
  Modified to incorporate two additional forms of phased/transitional retirement, and to clarify language.
  Updated policy title from “Faculty Retirement Transition Program.”
  Approved April 3, 2017 by the Board of Visitors.
  Approved April 3, 2017 by President Timothy D. Sands.

- Revision 7
  Modified to clarify that the guidelines for part-time temporary re-employment after retirement applies to all VTRP retirees (section 2.4)
  Approved April 1, 2019 by the Board of Visitors.
  Signed April 6, 2019 by President Timothy D. Sands.
RESOLUTION ON APPOINTMENT TO THE
NEW RIVER VALLEY EMERGENCY COMMUNICATIONS REGIONAL AUTHORITY

WHEREAS, the New River Valley Emergency Communications Regional Authority (the Authority) consists of five members who are responsible for the management and operation of the Authority – each of the political subdivisions have the right to appoint one member, and one at-large member is appointed jointly by the Virginia Tech Board of Visitors, the Blacksburg and Christiansburg Town Councils, and the Montgomery County Board of Supervisors; and

WHEREAS, the Board of Visitors approved the appointment of Kevin L. Foust, Associate Vice President for Safety and Security, as the university’s representative to the Authority, effective December 1, 2019, to complete the current four-year term expiring August 31, 2023; and

WHEREAS, Kevin L. Foust has announced his intent to retire from Virginia Tech on or about June 1, 2021, thereby vacating his role as the university’s representative to the Authority; and

WHEREAS, Virginia Tech desires to appoint Dwayne L. Pinkney, Senior Vice President and Chief Business Officer, as the university’s representative to the Authority, effective June 1, 2021, to complete the current four-year term expiring August 31, 2023;

NOW, THEREFORE, BE IT RESOLVED, that Dwayne L. Pinkney, Senior Vice President and Chief Business Officer, be appointed as the university’s representative to and member on the New River Valley Emergency Communications Regional Authority effective June 1, 2021, to complete the current four-year term expiring August 31, 2023.

RECOMMENDATION:

That the resolution recommending that Dwayne L. Pinkney, Senior Vice President and Chief Business Officer, be appointed as the university’s representative to the New River Valley Emergency Communications Regional Authority Board of Directors be approved.

March 22, 2021
Date: 2/12/2021

To: Board of Visitors

Subject: Report of open contracts entered into subject to the Code of Virginia “State and Local Government Conflict of Interests Act” (“the Act”) § 2.2-3106 C. 8.

There were three contracts entered into at the time of this report (from 10/1/2020 – 12/31/2020) subject to the Act’s exception for prohibited contracts involving research and development or commercialization of intellectual property. Details as per the Act § 2.2-3106 E. are included below.

<table>
<thead>
<tr>
<th>Contract</th>
<th>#1</th>
<th>#2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open contract number</td>
<td>PTBEZ4ZH</td>
<td>PUVOEXHI</td>
</tr>
<tr>
<td>Names of parties</td>
<td>Virginia Tech and the Centre for Conservation of African Resources: Animals, Communities, and Land Use (CARACAL)</td>
<td>Virginia Tech and Graf Research Corporation</td>
</tr>
<tr>
<td>Date contract executed</td>
<td>10/19/20</td>
<td>10/22/20</td>
</tr>
<tr>
<td>Contract term</td>
<td>9/1/20-8/31/24</td>
<td>6/1/20-5/31/22</td>
</tr>
<tr>
<td>Subject of contract</td>
<td>“CNH2-L: Human waste and its role in creating integrated socio-environmental systems at the urban-wilderness continuum in Africa: humans, wildlife, domestic animals, and microbes”</td>
<td>&quot;Non-destructive Verification of FPGA Authenticity&quot;</td>
</tr>
<tr>
<td>Nature of COI</td>
<td>Kathleen Alexander, Associate Professor in the Department of Fish and Wildlife Conservation, has reported a financial interest in the Centre for Conservation of African Resources: Animals, Communities, and Land Use (CARACAL) and is the President of its Board. CARACAL is a not-for-profit organization registered as a society in Botswana. Virginia Tech has received an award from the National Science Foundation (NSF), which includes a subaward to CARACAL. Kathleen Alexander will carry out the scope of work as the Principal Investigator for Virginia Tech. CARACAL may also seek to participate in further research and development with Virginia Tech. Kathleen Alexander has a financial conflict of interest (FCOI) with state law implications that requires management in order to promote research objectivity.</td>
<td>Peter Athanas, Professor in the Department of Electrical and Computer Engineering, has reported consulting work for Graf Research Corporation and has received compensation in excess of $5,000. Graf Research Corporation has received an award from the United States Air Force Research Laboratory that includes a subaward to Virginia Tech. Peter Athanas will serve as the Principal Investigator for Virginia Tech. Graf Research Corporation may also seek to participate in further research and development with Virginia Tech. Peter Athanas has a financial conflict of interest (FCOI) with state law implications that requires management in order to promote research objectivity.</td>
</tr>
</tbody>
</table>
| Institution employee responsible for administering contract | Trudy Riley, contract administration signatory  
Director, Virginia Tech Office of Sponsored Programs | Trudy Riley, contract administration signatory  
Director, Virginia Tech Office of Sponsored Programs |
<p>| The institution's commitment of resources or finances for the contract | N/A | N/A |
| Details of how revenues are to be dispersed | N/A (no revenues will be generated) | N/A (no revenues will be generated) |</p>
<table>
<thead>
<tr>
<th>Contract</th>
<th>#3</th>
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<tbody>
<tr>
<td>Open contract number</td>
<td>P772GEES</td>
</tr>
<tr>
<td>Names of parties</td>
<td>Virginia Tech and Kryptowire LLC</td>
</tr>
<tr>
<td>Date contract executed</td>
<td>12/4/20</td>
</tr>
<tr>
<td>Contract term</td>
<td>9/8/20-7/31/21</td>
</tr>
<tr>
<td>Subject of contract</td>
<td>“EPIC SWaPD: Energy-Preserving IoT Cryptography for Small Weight and Power Devices”</td>
</tr>
<tr>
<td>Nature of COI</td>
<td>Angelos Stavrou, Professor in the Department of Electrical and Computer Engineering, has reported an equity interest in Kryptowire LLC, where they serve as Chief Executive Officer and receive salary in excess of $5,000. Kryptowire LLC received an award from the Defense Advanced Research Projects Agency (DARPA) that includes a subaward to Virginia Tech. Matthew Hicks is the Principal Investigator for Virginia Tech. Angelos Stavrou will serve as the Principal Investigator for Kryptowire LLC. Angelos Stavrou has a financial conflict of interest (FCOI) with state law implications that requires management in order to promote research objectivity.</td>
</tr>
</tbody>
</table>
| Institution employee responsible for administering contract | Trudy Riley, contract administration signatory  
Director, Virginia Tech Office of Sponsored Programs |
| The institution's commitment of resources or finances for the contract | N/A |
| Details of how revenues are to be dispersed | N/A (no revenues will be generated) |
Closed Session Agenda

ACADEMIC, RESEARCH, AND STUDENT AFFAIRS COMMITTEE

Inn at Virginia Tech
Monday, March 22, 2021
8:30 – 9:00 a.m.

<table>
<thead>
<tr>
<th>Agenda Item</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1. Motion to Begin Closed Session</td>
<td>G. Harris</td>
</tr>
<tr>
<td>* 2. Resolutions to Approve Appointments to Emeritus/a Status (6)</td>
<td>C. Clarke</td>
</tr>
<tr>
<td>* 3. Resolutions to Approve Appointments to Endowed Chairs, Professorships, or Fellowships (11)</td>
<td>C. Clarke</td>
</tr>
<tr>
<td>* 4. Resolution to Approve Appointments with Tenure (3)</td>
<td>C. Clarke</td>
</tr>
<tr>
<td>* 5. Resolutions to Approve Appointments to University Distinguished Professor (4)</td>
<td>C. Clarke</td>
</tr>
<tr>
<td>* 6. Resolution to Approve Faculty Research Leaves (65)</td>
<td>C. Clarke</td>
</tr>
<tr>
<td>7. Ratification of Personnel Changes Report</td>
<td>C. Clarke</td>
</tr>
</tbody>
</table>

*Requires Full Board Approval
Closed Session Agenda

ACADEMIC, RESEARCH, AND STUDENT AFFAIRS COMMITTEE

Inn at Virginia Tech
Monday, March 22, 2021
8:30 – 9:00 a.m.

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<td>G. Harris</td>
</tr>
</tbody>
</table>

* Greta Harris, chair of the committee, will welcome committee members and request that a member of the committee make a motion to take the committee into closed session.

* 2. Resolutions to Approve Appointments to Emeritus/a Status (6) | C. Clarke |

* The committee will consider six resolutions for appointments to emeritus or emerita status.

* 3. Resolutions to Approve Appointments to Endowed Chairs, Professorships, or Fellowships (11) | C. Clarke |

* The committee will consider 11 resolutions for appointments to endowed chairs, professorships, or fellowships.

* 4. Resolution to Approve Appointments with Tenure (3) | C. Clarke |

* The committee will consider a resolution to approve the tenured appointments of three faculty members.

* 5. Resolutions to Approve Appointments to University Distinguished Professor (4) | C. Clarke |

* The University Distinguished Professorship (UDP) is a pre-eminent faculty rank bestowed by the university’s Board of Visitors upon members of the university faculty whose scholarly attainments have attracted national and/or international recognition. The committee will consider four resolutions for appointment to University Distinguished Professor.

* 6. Resolution to Approve Faculty Research Leaves (65) | C. Clarke |

*Requires Full Board Approval
The committee will consider a resolution to approve 65 requests for faculty research leave.

* 7. Ratification of Personnel Changes Report  C. Clarke

The Faculty Personnel Changes Report is considered at each board meeting by the Academic, Research, and Student Affairs Committee and the Finance and Resource Management Committee. The report includes new faculty appointments and adjustments in salaries for faculty through the quarter ending December 31, 2020.
# Open Session Agenda

**ACADEMIC, RESEARCH AND STUDENT AFFAIRS COMMITTEE**

Inn at Virginia Tech  
Monday, March 22, 2021  
9:00 a.m. – 11:30 a.m.

<table>
<thead>
<tr>
<th>Agenda Item</th>
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<tbody>
<tr>
<td>1. Motion to Return to Open Session</td>
<td>G. Harris</td>
</tr>
<tr>
<td>2. Welcome and Acceptance of Agenda</td>
<td>G. Harris</td>
</tr>
<tr>
<td>3. Report of Closed Session Action Items</td>
<td>G. Harris</td>
</tr>
<tr>
<td>4. Consent Agenda</td>
<td>G. Harris</td>
</tr>
<tr>
<td>A. Approval of November 16, 2020 Minutes</td>
<td></td>
</tr>
<tr>
<td>B. Report of Reappointments to Endowed Chairs, Professorships, and Fellowships</td>
<td></td>
</tr>
<tr>
<td>*C. Resolution to Approve New Bachelor of Science in Education Degree in Elementary Education</td>
<td></td>
</tr>
<tr>
<td>*D. Resolution to Approve New Undergraduate Education Degree with Two Designations: Bachelor of Arts in Education Degree in Secondary Education and Bachelor of Science in Education Degree in Secondary Education</td>
<td></td>
</tr>
<tr>
<td>*E. Resolution to Establish a Scholarly Articles Open Access Policy</td>
<td></td>
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<tr>
<td>*F. Resolution to Approve Appointment to the Virginia Coal and Energy Research and Development Advisory Board</td>
<td></td>
</tr>
<tr>
<td>*G. Resolution to Revise Faculty Handbook Promotion and Tenure Guidelines</td>
<td></td>
</tr>
<tr>
<td>*H. Resolution to Revise Chapter Five of the Faculty Handbook: Employment Policies and Procedures for Non Tenure-Track Faculty</td>
<td></td>
</tr>
<tr>
<td>*I. Resolution to Clarify Probationary Reappointment Language in the Faculty Handbook</td>
<td></td>
</tr>
<tr>
<td>*J. Resolution to Amend Virginia Tech’s Voluntary Transitional Retirement Program for Tenured Faculty (University Policy 4410)</td>
<td></td>
</tr>
<tr>
<td>5. Update: College of Liberal Arts and Human Sciences</td>
<td>L. Belmonte</td>
</tr>
<tr>
<td>6. Report from the Council of College Deans</td>
<td>L. Belmonte</td>
</tr>
<tr>
<td>7. ♦ Provost’s Update</td>
<td>C. Clarke</td>
</tr>
<tr>
<td>8. ♦ Student Affairs Discussion</td>
<td>F. Shushok</td>
</tr>
<tr>
<td>9. Future Agenda Items</td>
<td>G. Harris</td>
</tr>
<tr>
<td>10. Adjourn</td>
<td>G. Harris</td>
</tr>
</tbody>
</table>

* Requires Full Board Approval  
♦ Discusses Enterprise Risk Management topic(s)
Open Session Briefing Agenda

ACADEMIC, RESEARCH AND STUDENT AFFAIRS COMMITTEE

Monday, March 22, 2021

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<thead>
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<tbody>
<tr>
<td>1. Motion to Return to Open Session</td>
<td>G. Harris</td>
</tr>
<tr>
<td>The committee will vote to return to open session.</td>
<td></td>
</tr>
<tr>
<td>2. Acceptance of Agenda</td>
<td>G. Harris</td>
</tr>
<tr>
<td>Greta Harris, chair of the committee, will ask members to review and vote on acceptance of the meeting agenda including a vote on the Consent Agenda items.</td>
<td></td>
</tr>
<tr>
<td>3. Report of Closed Session Action Items</td>
<td>G. Harris</td>
</tr>
<tr>
<td>G. Harris will report on the actions taken during the committee’s Closed Session. These items will be considered during the full board’s Closed Session.</td>
<td></td>
</tr>
<tr>
<td>4. Consent Agenda</td>
<td>G. Harris</td>
</tr>
<tr>
<td>The committee will consider approval of items on the consent agenda including: November 16, 2020 minutes, a report on reappointments to endowed chairs, professorships, or fellowships, a resolution to approve a new Bachelor of Science degree in elementary education, a resolution to approve a new bachelor of arts degree in secondary education with two designations, a resolution to establish a scholarly articles open access policy, a resolution for an appointment to the Virginia Coal and Energy Research and Development Advisory Board, a resolution to revise the promotion and tenure guidelines in chapter three of the faculty handbook, a resolution to revise chapter five of the faculty handbook, a resolution to clarify probationary reappointment language in the faculty handbook, and a resolution to amend the voluntary transitional retirement program.</td>
<td></td>
</tr>
<tr>
<td>5. Update: College of Liberal Arts and Human Sciences</td>
<td>L. Belmonte</td>
</tr>
<tr>
<td>Laura Belmonte, dean of the College of Liberal Arts and Human Sciences (CLAHS) will offer the committee an update on the college including the various ways in which the college meets the university’s strategic goals. Presentation discussion will include college growth, diversity, equity, and inclusion, new programs and initiatives, research highlights, and the college’s response to COVID 19.</td>
<td></td>
</tr>
</tbody>
</table>

* Requires Full Board Approval

◆ Discusses Enterprise Risk Management topic(s)
6. **Report from the Council of College Deans**
   L. Belmonte, representative from the university’s Council of College Deans will provide the committee with an update from the perspective of the college deans.

7. ♦ **Provost’s Update**
   Cyril Clarke, executive vice president and provost, will update the committee on the university’s academic initiatives.

8. ♦ **Student Affairs Discussion**
   Frank Shushok, vice president for student affairs, and C. Clarke will facilitate a discussion on the ways initiatives housed within the Division of Student Affairs advance the holistic education of students. The discussion will highlight university resources available to students including residential learning communities, student leadership opportunities, and counseling services.

9. **Items for Possible Inclusion on Future Agendas**
   G. Harris

10. **Adjourn**
    G. Harris

* Requires Full Board Approval
♦ Discusses Enterprise Risk Management topic(s)
Open Session Agenda

BUILDINGS AND GROUNDS COMMITTEE

Tour begins at 7:50 a.m.

9:30 a.m. Open Session meeting begins
The Inn at Virginia Tech – Latham Ballroom A/B

Monday, March 22, 2021

<table>
<thead>
<tr>
<th>Agenda Item</th>
<th>Reporting Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tour of the Creativity and Innovation District Living-Learning Community</td>
<td>Chris Kiwus, Frank Shushok</td>
</tr>
<tr>
<td>2. Welcome</td>
<td>C.T. Hill, Chair</td>
</tr>
<tr>
<td>3. Consent Agenda</td>
<td>C.T. Hill, Chair</td>
</tr>
<tr>
<td>a. Approval of the Minutes from the November 15, 2020 Meeting</td>
<td>C.T. Hill, Chair</td>
</tr>
<tr>
<td>b. Resolution on Appointment to the New River Valley Emergency Communications Regional Authority</td>
<td></td>
</tr>
<tr>
<td>c. Acceptance of the Capital Project Status Report</td>
<td></td>
</tr>
<tr>
<td>4. Update on Agricultural Facilities Planning and Construction</td>
<td>Alan Grant, Michael Schwarz</td>
</tr>
<tr>
<td>5. Design Review for the New Upper Quad Residence Hall</td>
<td>Liza Morris</td>
</tr>
<tr>
<td>6. Future Agenda Items and Closing Remarks</td>
<td>C.T. Hill, Chair</td>
</tr>
</tbody>
</table>

* Requires full Board approval.
Open Session

1. Tour of the Creativity and Innovation District Living-Learning Community: The Committee will tour the Creativity and Innovation District Living-Learning Community construction site.

2. Welcome: The Committee Chair will convene the meeting and provide welcoming remarks.

3. Consent Agenda: The Committee will consider for approval and acceptance the items listed on the Consent Agenda:
   a. Approval of the Minutes from the November 15, 2020 Meeting: The Committee will review for approval the minutes from the November 15, 2020 meeting.
   b. Acceptance of the Capital Project Status Report: The Committee will review for acceptance the quarterly capital project status report.

4. Briefing on the Financial Considerations of the Virginia Tech 2020 Climate Action Commitment: The Committee will receive a presentation on the financial considerations of the Virginia Tech 2020 Climate Action Commitment. A highly collaborative cross-divisional team worked to identify the financial impacts to achieve each prescribed pathway of the updated commitment. The team worked to analyze the economics and financial impacts of each initiative in depth and offer potential. While detailed and comprehensive, the analysis is based on assumptions regarding technologies, costs, and policies for the future that are uncertain. Current developments and future projections in energy markets and in state and federal energy policy indicate that future values of those assumptions – while uncertain now – may become more favorable for cost-effective implementation of the updated commitment. These evolving factors will be monitored and incorporated into five-year revisions in 2025 and 2030. In addition, the updated commitment requires an annual report of progress. That annual report will evaluate the assumptions and actual costs and/or savings of the commitment’s implementation.

5. Resolution to Approve the Virginia Tech 2020 Climate Action Commitment: The Committee will review for approval a resolution on the Virginia Tech 2020 Climate Action Commitment. Approved initially in 2009 by the Board of Visitors and revised in 2013, the Virginia Tech Climate Action Commitment serves as the university’s
guiding framework around sustainability and energy efficiency in campus operations, facilities, curriculum, and research.

In late 2019, President Sands called for its renewal and revision to ensure the most stringent climate and sustainability standards are implemented as the university continues to grow and seeks to be a leader in environmental stewardship. The mission of the revised commitment is to achieve carbon neutrality by changing our physical infrastructure, collective and individual behaviors, and educational mission; to engage everyone in creating a culture of sustainability; and to achieve these objectives through just and equitable means.

A working group of faculty experts, governance representatives, students, operations professionals, and community members led this charge and crafted the revision. Through participation in working group and subcommittee meetings, brainstorming sessions, and community engagement events, students involved in the revision process had countless opportunities to gain practical sustainability experience. Senior vice president and chief business officer, Dwayne Pinkney, sponsored the initiative. The work group was chaired by John Randolph, professor emeritus of urban affairs and planning, and co-chaired by Todd Schenk, assistant professor of urban affairs and planning and member of the Commission on Faculty Affairs.

On an aggressive timeline, the revision moved through university governance this fall, receiving approval from the Energy and Sustainability Committee, Commission on University Support, and the University Council. It was endorsed by the Faculty and Staff Senates, the Student Government Association, and the Graduate Student Assembly. The Committee received a preview of the updated Climate Action Commitment at its November 2020 meeting.

6. **Update on Agricultural Facilities Planning and Construction:** The Committee will receive an update from Alan Grant, Dean of the College of Agriculture and Life Sciences, on agricultural facilities planning and construction. Dr. Grant will be joined by Dr. Michael Schwarz, Director of the Virginia Seafood Agricultural Research and Extension Center, to discuss the impacts of the center and current improvement projects underway.

7. **Design Review for the New Upper Quad Residence Hall:** The Committee will receive the design review for the New Upper Quad Residence Hall. Located in the Northeast and Upper Quad District on the corner of Stanger Street and Old Turner Street, the New Upper Quad Residence Hall (NUQRH) will serve to expand the housing capacity for Virginia Tech Corps of Cadets with the addition of 301 beds.

The 67,876 gross square feet, five-story facility will accommodate a mix of residential rooms and support spaces on the ground floor. The second through fourth floors are residential, and the fifth will be comprised of attic space and mechanical equipment. This project will occupy the current site of Femoyer Hall, an existing facility that will be demolished as a part of this facility’s construction. Adjacent to this project's
eastern edge is the site of another capital project, the Corps Leadership and Military Science Building (CLMS), which is anticipated to begin construction in summer 2021. These two projects will be constructed concurrently and managed by a single construction manager at risk. The NUQRH is currently in working drawings with construction start and substantial completion to be coordinated with the adjacent CLMS schedule.

The $40 million project includes debt service to be provided by Residential Programs revenue and includes the $7 million supplement approved by the Board of Visitors in November 2020. This project was first proposed as part of the 2018-2024 Capital Outlay Plan.

8. **Future Agenda Items and Closing Remarks:** The Committee will discuss potential topics for inclusion on future meeting agendas.

* Requires full Board approval.
Open Joint Session Agenda

FINANCE AND RESOURCE MANAGEMENT COMMITTEE
AND BUILDINGS AND GROUNDS COMMITTEE

Latham A/B, The Inn at Virginia Tech

10:45 a.m.

March 22, 2021

Agenda Item          Reporting Responsibility
* 1. Approval of the 2022 – 2028 Capital Outlay Plan   Ken Miller  Bob Broyden

2. Financial Considerations of the Virginia Tech 2020 Climate Action Commitment  Dwayne Pinkney

* 3. Approval of the Virginia Tech 2020 Climate Action Commitment  Dwayne Pinkney

* Requires full Board approval.
♦ Discusses Enterprise Risk Management topic(s).
Joint Open Session

* 1. Approval of the 2022-2028 Capital Outlay Plan: The Committees will review for approval the 2020-2028 Capital Outlay Plan. The university prepares an updated Six-Year Capital Outlay Plan every two years as part of its normal planning and budgeting cycle. The Plan is a critical component of positioning the university for state support of major Educational and General projects and for advancing high priority projects that may be funded entirely with nongeneral fund resources. The next state capital outlay plan will be for 2022-2028 and will be established in the 2022 budget development process. Traditionally, the state requires each institution to submit a capital plan in June of the year before a new biennium begins. Based on that timetable, a plan from the university for 2022-2028 will be due to the state in June of 2021.

Preliminary work has been done to identify potential projects for inclusion in the 2022-2028 Capital Outlay Plan in anticipation of future guidance and instructions from the state. These projects are consistent with programmatic needs established for the planning period and with the strategic plan of the university, and they position the university with options to respond to guidance from the state.

Since the submission date for the new Plan may occur before the June 2021 Board of Visitors meeting, the university is requesting the review and approval of the list of potential projects for inclusion in the 2022-2028 Capital Outlay Plan. The university will provide an update to the status of the 2022-2028 Plan at a future Board of Visitors meeting.

2. Financial Considerations of the Virginia Tech 2020 Climate Action Commitment: The Committees will receive a presentation on the financial considerations of the Virginia Tech 2020 Climate Action Commitment. A highly collaborative cross-divisional team worked to identify the financial impacts to achieve each prescribed pathway of the updated commitment. The team worked to analyze the economics and financial impacts of each initiative in depth and offer potential.

While detailed and comprehensive, the analysis is based on assumptions regarding technologies, costs, and policies for the future that are uncertain. Current developments and future projections in energy markets and in state and federal energy policy indicate that future values of those assumptions – while
uncertain now – may become more favorable for cost-effective implementation of the updated commitment. These evolving factors will be monitored and incorporated into five-year revisions in 2025 and 2030. In addition, the updated commitment requires an annual report of progress. That annual report will evaluate the assumptions and actual costs and/or savings of the commitment’s implementation. No specific funding decisions are to be made at this time. Funding requests will be incorporated into annual operating/capital budgeting processes. All financial needs compete for resources while considering tuition/fee constraints and university debt capacity.

3. Resolution to Approve the Virginia Tech 2020 Climate Action Commitment:
The Committees will review for approval a resolution on the Virginia Tech 2020 Climate Action Commitment. Approved initially in 2009 by the Board of Visitors and revised in 2013, the Virginia Tech Climate Action Commitment serves as the university’s guiding framework around sustainability and energy efficiency in campus operations, facilities, curriculum, and research.

In late 2019, President Sands called for its renewal and revision to ensure the most stringent climate and sustainability standards are implemented as the university continues to grow and seeks to be a leader in environmental stewardship. The mission of the revised commitment is to achieve carbon neutrality by changing our physical infrastructure, collective and individual behaviors, and educational mission; to engage everyone in creating a culture of sustainability; and to achieve these objectives through just and equitable means.

A working group of faculty experts, governance representatives, students, operations professionals, and community members led this charge and crafted the revision. Through participation in working group and subcommittee meetings, brainstorming sessions, and community engagement events, students involved in the revision process had countless opportunities to gain practical sustainability experience. Senior vice president and chief business officer, Dwayne Pinkney, sponsored the initiative. The work group was chaired by John Randolph, professor emeritus of urban affairs and planning, and co-chaired by Todd Schenk, assistant professor of urban affairs and planning and member of the Commission on Faculty Affairs.

On an aggressive timeline, the revision moved through university governance this fall, receiving approval from the Energy and Sustainability Committee, Commission on University Support, and the University Council. It was endorsed by the Faculty and Staff Senates, the Student Government Association, and the Graduate Student Assembly. The Board received a preview of the updated Climate Action Commitment at its November 2020 meeting.

* Requires full Board approval.
♦ Discusses Enterprise Risk Management topic(s).
Background:

The university prepares an updated Six-Year Capital Outlay Plan (Plan) every two years as part of its normal planning and budgeting processes. The Plan is a critical component of positioning the university for state support of Educational and General capital projects and for advancing high priority projects that may be funded entirely with nongeneral fund resources. The next state capital outlay plan will be for the 2022-2028 period and will be established in the 2022 budget session of the General Assembly. Traditionally, the state requires each institution to submit a capital plan in June of the year before a new biennium begins. Based on that timetable, a plan from the university for 2022-2028 will be due to the state in June of 2021. At this time, the state has not yet provided instructions or specific guidance for the development of a plan.

In preparation for the 2022-2028 Plan submission to the state, the Campus Planning and Capital Financing unit coordinates a process to develop a listing of high priority projects for the planning period. The process includes the following major phases:

1. Identify a comprehensive list of space and facility needs, (shown in Appendix 1);
2. Develop potential solutions for each need;
3. Filter out solutions that do not meet the capital project threshold, must be referred for further programming and operating plan development, and/or logistically exceed the six-year planning period;
4. Consolidate the list of solutions for duplication and package the solutions into capital projects;
5. Organize the list of projects into a subset for General Fund requests that must be submitted to the state for budget consideration and a subset for entirely nongeneral fund projects that may be authorized by the Board of Visitors;
6. Rank the General Fund list in priority order for funding based on strategic impact and funding potential; and
7. Review the list internally with university leadership for presentation to the Board of Visitors.

The prioritized rankings of General Fund projects for both the University Division and the Cooperative Extension/Agricultural Experiment Stations (CE/AES) agencies of Virginia Tech are shown in Attachment A, and projects that call for entirely nongeneral fund support are listed in Attachment B.
**General Fund Requests, Attachment A:**

The highest priority projects requesting General Fund resources are listed under each division of Virginia Tech in their priority order, which reflects the strategic priorities of Virginia Tech and state priorities as understood at this time. The total dollar value of the list exceeds projected resources likely to be allocated to Virginia Tech during the planning period. By including a variety of high priority needs in the listing, the university ensures it has the flexibility to adapt to various state capital funding programs that may emerge over the upcoming 12 months.

The state requires that an institution’s Board of Visitors review and approve projects prior to submission in the state budget process. Because the submission date to the state may occur before the June 2021 Board of Visitors meeting, the university is seeking the review and approval of the list of potential projects for inclusion in its submission to the state, shown in Attachment A. When guidance and instructions are received from the state, the university will prepare and submit its capital budget items based upon the projects included in Attachment A. If future instructions and/or guidance from the state necessitate a change in the rankings or arrangement of projects in the General Fund listing, a final list with adjustments as submitted to the state will be brought to the Board of Visitors for review and ratification at a subsequent meeting.

**Nongeneral Fund Projects, Attachment B:**

Attachment B lists the highest priority projects that call for entirely nongeneral fund resources in their budget and that are reasonably expected to be implemented by 2028. This section covers the auxiliary enterprise system projects and other projects requesting some combination of private support, returned overhead dollars, external construction grants, and/or nongeneral fund debt to fund the total costs, including capital leases.

Under the university’s Management Agreement with the state for Capital Projects, the Board of Visitors has the authority to approve and implement projects supported 100 percent by nongeneral funds. Each project follows a three-step approval process by the Board of Visitors and those that require external debt require a fourth approval step. The steps include 1) inclusion in the approved Six-Year Capital Outlay Plan, 2) authorization for planning to produce design documents to validate the project’s feasibility, 3) authorization for construction when funding is available and sufficient, and 4) approval of external debt required for any capital project prior to issuance.

Auxiliary enterprise projects with a financing plan that calls for an increase of student fees depend on Board of Visitors approval of the rates as part of the Tuition and Fee package. Projects with a financing plan that calls for private gifts depend on the successful completion of donation commitments and cash receipts.

**Project Costs:**

The projects costs shown on the Plan reflect total project cost estimates based on campus historical experience, industry trends, benchmarking of unit costs for program descriptions, and scope of the proposed facilities. The estimates reflect costs escalated to a mid-point of construction three years out.
**Debt Financing:**

Projects with nongeneral fund support, including portions of some gift campaigns, may use external debt to finance a portion of the project. Each potential debt financing undergoes an internal financial feasibility assessment to ensure resources are sufficient to cover the full debt service term without unnecessary financial risk to the unit’s operations.

The positioning of debt is further analyzed to ensure the university does not exceed the parameters of the university debt policy or debt management practices, which sets a maximum limit of a five percent ratio of total annual debt service to total operating expenses. This evaluation is projected six-years out and includes anticipated issuances for projects in the Plan. The Board of Visitors reviews and approves an annual report of debt capacity and debt ratio and authorizes individual debt packages prior to an issuance. These practices provide an important set of controls to ensure the institution’s debt obligations do not become a point of inflexibility in reaching the operational goals of the institution, to ensure the university is holding sufficient debt capacity for its highest priorities, and to ensure compliance with restructuring requirements for credit ratings and debt ratios.

**Division of Student Affairs Capital Improvement Program:**

During this Six-Year Plan update cycle, the Division of Student Affairs introduced a novel concept for exploration. The proposal calls for exploring an opportunity to repurpose the funding authorized for certain projects to establish phase one of a new student life district that would be phased over time to include residential, dining, recreation, and student commons spaces. A key feature of the concept is for the new village to be accessible to campus and to follow a design standard and building delivery system that controls costs. The funding plan for this proposal calls for the consolidation of funding for the Global Business and Analytics Complex Residence Hall, Slusher Hall Replacement, and the dining program’s food processing facility. The university’s next steps call for further internal programming, master planning, and operating planning to develop a full-blown implementation plan for the student life district concept. The university will provide updates on the progress of this concept at future Board of Visitors meetings.

**RECOMMENDATION:**

That the Capital Outlay Plan for 2022-2028 as shown in Attachments A and B, be approved and for the university to submit the items in Attachment A in the state’s capital budget process in accordance with future instructions and guidance from the state.

March 22, 2021
## University Division

<table>
<thead>
<tr>
<th>Project Description</th>
<th>General Fund</th>
<th>Nongeneral Fund</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Randolph Hall Replacement</td>
<td>$208,800</td>
<td>$23,200</td>
<td>$232,000</td>
</tr>
<tr>
<td>2 Hahn Hall Renovation and Expansion</td>
<td>71,700</td>
<td>28,000</td>
<td>99,700</td>
</tr>
<tr>
<td>3 Academic Renewal Package</td>
<td>80,000</td>
<td>-</td>
<td>80,000</td>
</tr>
<tr>
<td>Renovate Media Building</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Advising and Academic Services Center</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classroom Renovations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music / Theater Program Space</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lane Hall Renovation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Robeson Hall Renovation</td>
<td>37,000</td>
<td>7,300</td>
<td>44,300</td>
</tr>
<tr>
<td>5 Newman Library Renovation</td>
<td>70,300</td>
<td></td>
<td>70,300</td>
</tr>
<tr>
<td>6 Derring Hall Renovation</td>
<td>94,000</td>
<td>7,600</td>
<td>101,600</td>
</tr>
<tr>
<td>7 Life, Health, Safety, Code Compliance Package</td>
<td>6,000</td>
<td></td>
<td>6,000</td>
</tr>
<tr>
<td>Total University Division Projects</td>
<td>$567,800</td>
<td>$66,100</td>
<td>$633,900</td>
</tr>
</tbody>
</table>

## Cooperative Extension / Agriculture Experiment Station Division (CE/AES)

<table>
<thead>
<tr>
<th>Project Description</th>
<th>General Fund</th>
<th>Nongeneral Fund</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Improve Research Facilities</td>
<td>$26,900</td>
<td></td>
<td>$26,900</td>
</tr>
<tr>
<td>Center Woods Complex Improvements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System-wide Agricultural Research and Extension Centers Improvements, Phase I</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Replace Animal Based Facilities at Glade Road</td>
<td>26,300</td>
<td></td>
<td>26,300</td>
</tr>
<tr>
<td>3 Construct Animal Production and Livestock Facilities, Phase II</td>
<td>27,100</td>
<td></td>
<td>27,100</td>
</tr>
<tr>
<td>4 Construct Plant and Environmental Sciences Research Facility (HABB-II)</td>
<td>68,200</td>
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<td>Total CE/AES Division Projects</td>
<td>$148,500</td>
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</table>

## Total General Fund Capital Plan for 2022-2028

<table>
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<tr>
<th>General Fund</th>
<th>Nongeneral Fund</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>$716,300</td>
<td>$66,100</td>
<td>$782,400</td>
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</table>
### Attachment B

**Nongeneral Fund Six-Year Capital Outlay Plan for 2022-2028**

*as of February 26, 2021*

<table>
<thead>
<tr>
<th>Dollar in Thousands</th>
<th>General Fund</th>
<th>Nongeneral Fund</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blacksburg Academic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gilbert Street Building (long-term lease)</td>
<td>$ -</td>
<td>$60,000</td>
<td>$60,000</td>
</tr>
<tr>
<td>Hitt Hall - Academic Component</td>
<td>-</td>
<td>36,000</td>
<td>36,000</td>
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<tr>
<td>New Building for Pamplin College of Business</td>
<td>-</td>
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<tr>
<td>Research Swing Space (long-term lease)</td>
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</tr>
<tr>
<td>Veterinary Teaching Hospital Expansion</td>
<td>-</td>
<td>21,000</td>
<td>21,000</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>217,800</td>
<td>217,800</td>
</tr>
<tr>
<td>Blacksburg Auxiliaries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food Processing Center and Warehouse</td>
<td>-</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Hitt Hall -- New Dining Center</td>
<td>-</td>
<td>43,000</td>
<td>43,000</td>
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<tr>
<td>Tennis Center Improvements</td>
<td>-</td>
<td>4,000</td>
<td>4,000</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>57,000</td>
<td>57,000</td>
</tr>
<tr>
<td>Greater Washington D.C., Metro Area</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Ballston: Renovate Research Space</td>
<td>-</td>
<td>5,000</td>
<td>5,000</td>
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<tr>
<td>Total Nongeneral Fund Capital Plan for 2022-2028</td>
<td>$ -</td>
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**GRAND TOTAL SIX-YEAR CAPITAL OUTLAY PLAN**

<table>
<thead>
<tr>
<th>Dollar in Thousands</th>
<th>General Fund</th>
<th>Nongeneral Fund</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$716,300</td>
<td>$345,900</td>
<td>$1,062,200</td>
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</tr>
</tbody>
</table>
General Fund Projects – Attachment A:

University Division

1. Randolph Hall Replacement
   Randolph Hall was constructed in 1952 with an addition in 1959, and no major renovations since construction was completed. This project envisions razing and replacing the entire 166,000 GSF existing building and constructing a new 284,000 GSF building at the same site. The funding plan for this project includes $23.2 million of private gifts.

2. Hahn Hall Renovation and Expansion
   Hahn Hall was constructed in 1988 with an addition in 2002, and no major renovations since construction was completed. The proposed project includes renovating the entire 71,100 GSF existing building and expanding with a 53,000 GSF addition to provide space for instructional classrooms, laboratory space, and support space for the physics and chemistry programs.

3. Academic Renewal Package
   This project packages together several small and medium sized high priority facility renewal items.

   - Renovate Media Building: This subproject will renovate the entire 13,200 square foot Media Building located in the Creativity and Innovation District to provide updated spaces for art programs.

   - Student Advising and Academic Services Center: This subproject will renovate the entire 24,500 GSF of the G. Burke Johnson Student Center to repurpose it for the consolidation of Undergraduate Academic Affairs and Degree and Enrollment Management functions.

   - Classroom Renovations: This subproject will renovate approximately 56,250 GSF of outdated and underutilized general assignment classroom space to meet the existing space demand and to support planned enrollment growth.
• **Music / Theater Program Space:** The subproject relocates the music and theater programs from Squires Student Center to a new approximately 85,800 GSF facility in the Creativity and Innovation District. This is a critical precursor to vacating Squires Student Center to move forward other major projects in the Creativity and Innovation District.

• **Lane Hall Renovation:** Originally known as Barracks No. 1, Lane Hall was built in 1888 and converted to office use in 1967. This subproject is for the renovation and preservation of the 26,580 GSF historic building to house academic programs.

4. **Robeson Hall Renovation**

Robeson Hall was constructed in 1960 with no major improvements or renovations since construction was completed. The project includes renovating the 66,000 GSF existing building to provide modern laboratories and support space to meet the needs for instructional classrooms and laboratory space for the physics and materials sciences programs.

5. **Newman Library Renovation**

Newman Library was constructed in 1955 with an addition in 1980, with no major renovations since construction was completed. This project envisions constructing a new library storage facility off-campus followed by a renovation of the entire Newman Library to address student demand for a high-quality library environment with up-to-date interactive learning formats.

6. **Derring Hall Renovation**

Derring Hall was constructed in 1969 with only one major improvement via renovation since the original construction was completed. This request is to renovate and modernize this high demand instructional building for physical sciences programs.

7. **Life, Health, Safety, Code Compliance Package**

The university’s health, safety, and accessibility initiative for the campus is an ongoing effort, and the university includes a request for this program in each capital plan. This project continues progress on needed campus improvements including accessibility improvements and life safety repairs that are beyond the scope of the Maintenance Reserve program.
**Cooperative Extension / Agricultural Experiment Station Division**

1. **Improve Research Facilities**
   - **Center Woods Complex Improvements:** This project proposes 25,900 gross square feet (GSF) of improvements to the Center Woods Complex for the Fisheries and Wildlife program, located off Plantation Road.
   - **System-wide Agricultural Research and Extension Centers Improvements, Phase I:** This project will address the top priority infrastructure and renovation needs for Agricultural Research and Extension Centers across the state. This phase of the project includes approximately 50,660 GSF of space for the programmatic needs.

2. **Replace Animal Based Facilities at Glade Road**
   This project relocates agricultural and animal-based assets from the Glade Road area to better long-term locations near the College of Agriculture and Life Sciences and the Virginia-Maryland College of Veterinary Medicine facilities. The project includes multiple new construction projects that contain approximately 64,200 GSF as well as the demolition of outdated assets.

3. **Construct Animal Production and Livestock Facilities, Phase II**
   This project completes the two-part effort to systematically replace approximately 228,200 GSF of animal-based facilities that have exceeded their useful life. The state appropriated a phase one project to address 126,000 GSF of improvements. This phase two project includes approximately 102,600 GSF of renewed animal and multi-use facilities primarily serving beef cattle, equine, sheep, and poultry research. The replacement facilities consolidate functions and operational efficiencies.

4. **Construct Plant and Environmental Sciences Research Facility (HABB-II)**
   This project is to provide a second 94,000 GSF modern research space that will focus on plant sciences within the Agricultural Experiment Station including research laboratories, laboratory support space, research offices, faculty offices, and graduate student research space.

**Nongeneral Fund Projects – Attachment B:**

**Blacksburg Academic**

**Gilbert Street Building (long-term lease)**

The Virginia Tech Foundation is constructing a new facility adjacent to the North End Center. This building will provide space for retail operators on the ground level with the upper floors dedicated to university programs. The university will enter a long-term lease agreement with the Foundation.
Hitt Hall – Academic Component

Hitt Hall includes approximately 55,000 gross square feet (GSF) of space for instruction and laboratory space, as well as faculty, staff, and graduate student work space for the growing School of Construction. The new building will be located in the northwest area of campus near Bishop-Favrao Hall and the new Classroom Building. The overall funding plan for this project includes $25 million of private gifts.

New Building for Pamplin College of Business

The project includes approximately 104,000 GSF of new construction to house the Pamplin College of Business. The proposed building will provide the college expanded, modern instructional space sufficient to meet demand for interactive learning including a variety of general purpose and specialized classrooms, learning laboratories, and seminar rooms. The funding plan for this project includes $40.4 million of private gifts.

Research Swing Space (long-term lease)

The Corporate Research Center is constructing an approximately 68,000 GSF facility configured for research functions. The space is necessary to provide swing space capacity to renovate high priority academic buildings.

Veterinary Teaching Hospital Expansion

The project includes approximately 16,300 GSF of renovation and 25,300 GSF of new construction at the veterinary hospital to provide space for program expansion and enrollment growth. The funding plan for this project includes $7 million of private gifts.

Blacksburg Auxiliaries

Food Processing Center and Warehouse

This project is for a new 45,000 GSF food processing center and warehouse to provide Dining Services with modern space for central food preparation, bakeshop, and cold storage to meet the growing demands of campus dining centers.

Hitt Hall – New Dining Center

The new dining hall will be co-located with the Hitt Hall academic program and will be located in the northwest area of campus near Bishop-Favrao Hall and the new Classroom Building.

Tennis Center Improvements

This project will renovate the existing tennis facilities to include expanded locker rooms, team lounges, medical training support, and fan viewing areas. The funding plan for this project includes $4 million of private gifts.
Greater Washington D.C., Metro Area

Ballston: Renovate Research Space

This approximately 20,000 rentable square foot renovation will reconfigure existing space to better serve the university’s long-term goals for the Ballston area including research to address topics related to national and homeland security.
RESOLUTION TO APPROVE THE
VIRGINIA TECH 2020 CLIMATE ACTION COMMITMENT

WHEREAS, Virginia Tech recognizes that sustainability is an integral part of the fabric of the university as it pursues enhanced economic stability and affordability, diversity and inclusion, environmental stewardship, expansion of knowledge, and education of future leaders; and

WHEREAS, Virginia Tech has long been recognized as a leader in campus sustainability, with the highest scores for the Association for the Advancement of Sustainability in Higher Education (AASHE) Sustainability Tracking, Assessment, and Rating System (STARS) for institutions in the Commonwealth of Virginia and the Atlantic Coast Conference, numerous Governor’s Environmental Excellence Awards, prominent standing in Princeton Review’s top 50 Green Colleges, and many other accolades; and

WHEREAS, the 2009 Virginia Tech Climate Action Commitment and Sustainability Plan, as revised in 2013, was a cutting-edge effort for its time, but now fails to prescribe what climate scientists recognize as necessary actions and also falls short of many peer universities’ recent initiatives; and

WHEREAS, the campus community has pushed for more aggressive climate action as represented by demands of student environmental organizations and resolutions by the Faculty Senate and Staff Senate, the Student Government Association, and the Graduate Student Assembly; and

WHEREAS, Virginia Tech President Timothy D. Sands stated in November 2019 that “climate change presents one of the world’s most pressing problems…and Virginia Tech has a duty to respond,” and called for a new working group to evaluate the university’s progress in climate action and to update its climate action commitment; and

WHEREAS, a 26-member Virginia Tech Climate Action Commitment Working Group met weekly for six months from January through June 2020; led 12 subcommittees involving 125 faculty, staff, student, and community participants; and engaged hundreds of university community members in online surveys and virtual convening sessions, to produce a comprehensive evaluation of progress and develop a new Virginia Tech 2020 Climate Action Commitment; and

WHEREAS, the Virginia Tech 2020 Climate Action Commitment contains an aggressive yet pragmatic set of 15 goals – and pathways to achieve those goals – that involve necessary upgrades to the campus physical infrastructure and operations to reduce greenhouse gas emissions (GHG), integrate these improvements into the university’s educational and research mission, engage everyone to enhance the campus culture of sustainability, and consider these
actions’ financial, environmental, reputational, and social equity impacts and benefits; and

WHEREAS, the Virginia Tech 2020 Climate Action Commitment sets the stage for Virginia Tech to shine as an exemplar and leader in higher education climate action by not only aiming to become a carbon neutral and zero-waste campus by 2030, but also utilizing the university’s unique Virginia Tech Electric Service to partner and develop a way to 100 percent renewable electricity by 2030; using considerable land resources to manage agricultural impacts, sequester carbon, and develop renewable energy; accounting for behavior-related GHG emissions from waste and transport; integrating climate action into education; and specifically addressing community engagement, sustainable behaviors, and social equity; and

WHEREAS, in developing innovative budgeting and financing mechanisms to achieve the Virginia Tech 2020 Climate Action Commitment goals, the university shall recognize that all financial needs compete for resources, consider the impact on tuition and fee constraints as well as university debt capacity, and incorporate funding requests into established annual operating and/or capital budgeting processes as appropriate;

NOW, THEREFORE, BE IT RESOLVED, that the Virginia Tech Board of Visitors approve the Virginia Tech 2020 Climate Action Commitment, including the following vision and mission statements, and 15 goals:

**Vision** of the Virginia Tech 2020 Climate Action Commitment:

*In the spirit of Ut Prosim, Virginia Tech will be a leader in climate action in service to our community, the Commonwealth, and the world.*

**Mission** of the Virginia Tech 2020 Climate Action Commitment:

*The mission of the Virginia Tech 2020 Climate Action Commitment is to achieve carbon neutrality by changing our physical infrastructure, collective and individual behaviors, and educational mission; to engage everyone in creating a culture of sustainability; and to achieve these objectives through just and equitable means.*

**The Virginia Tech 2020 Climate Action Commitment Goals**

1. Carbon neutral Virginia Tech campus by 2030
2. 100 percent renewable electricity by 2030
3. Complete the total conversion of steam plant fuel to natural gas by 2025, plan for a full transition to renewable steam plant fuel after 2025, and continue to improve the efficiency of campus energy systems
4. Reduce building energy consumption to enable carbon neutrality by 2030
5. Operations of new buildings initiated by 2030 will be carbon neutral
6. Agricultural, forestry, and land use operations will be carbon neutral by 2030
7. Virginia Tech to become a Zero-Waste Campus by 2030
8. Establish sustainable procurement policy and procedures by 2022
9. Reduce single-occupancy-vehicle commuting to campus by 20 percent by 2025 and reduce transportation-related GHG emissions by 40 percent by 2030
10. Integrate the Virginia Tech 2020 Climate Action Commitment into the university's educational mission through a new Climate Action Living Laboratory beginning in 2021
11. Establish climate justice as a core value of the Virginia Tech 2020 Climate Action Commitment
12. Diminish barriers to sustainable behaviors through institutional change, education and social marketing
13. Implement the Virginia Tech 2020 Climate Action Commitment at a high level of university administration and governance; by integrating goals for facilities, education, and campus culture; and with stakeholder engagement in the ongoing evaluation of goals and progress
14. Develop innovative budgeting and financing mechanisms to generate funding and staffing to achieve the Virginia Tech 2020 Climate Action Commitment goals
15. Develop pathways after 2030 to eliminate fossil fuels and carbon offsets by 2050

**Recommendation:**

That the Virginia Tech 2020 Climate Action Commitment be approved.

March 22, 2021
Closed Session Agenda

COMPLIANCE, AUDIT, AND RISK COMMITTEE

The Inn at Virginia Tech, 1872 Salon
7:00 a.m.

March 22, 2021

<table>
<thead>
<tr>
<th>Agenda Item</th>
<th>Reporting Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Motion for Closed Session</td>
<td>Ms. Martin</td>
</tr>
<tr>
<td>2. Update on Fraud, Waste, and Abuse Cases</td>
<td>Ms. Kurek, Mr. Hamilton</td>
</tr>
<tr>
<td>3. Discussion with the Executive Director of Audit, Risk, and Compliance</td>
<td>Ms. Kurek</td>
</tr>
</tbody>
</table>
Compliance, Audit, and Risk Closed Session

1. **Motion for Closed Session:** Motion to begin closed session.

2. **Update on Fraud, Waste, and Abuse Cases:** The Committee will receive an update on outstanding fraud, waste, and abuse cases.

3. **Discussion with the Executive Director of Audit, Risk, and Compliance:** The Executive Director will discuss audits of specific departments and units where individual employees were identified.
Closed/Open Session Agenda

FINANCE AND RESOURCE MANAGEMENT COMMITTEE

Solitude Room, The Inn at Virginia Tech

10:00 a.m.

March 22, 2021

<table>
<thead>
<tr>
<th>Agenda Item</th>
<th>Reporting Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Motion to Begin Closed Session</td>
<td>Preston White</td>
</tr>
<tr>
<td>2. Ratification of Personnel Changes Report</td>
<td>Ken Miller, Cyril Clarke</td>
</tr>
<tr>
<td>3. Motion for Open Session</td>
<td>Anna James</td>
</tr>
<tr>
<td>4. Approval of Items Discussed in Closed Session</td>
<td>Ed Baine</td>
</tr>
</tbody>
</table>

* Requires full Board approval.
♦ Discusses Enterprise Risk Management topic(s).
Briefing Report

FINANCE AND RESOURCE MANAGEMENT COMMITTEE

March 22, 2021

Closed Session

1. **Motion for Closed Session:** Motion to begin closed session.

   * 2. **Ratification of Personnel Changes Report:** The Committee will review and ratify the quarterly Personnel Changes Report.

3. **Motion for Open Session:** Motion to begin open session.

4. **Approval of Items Discussed in Closed Session:** The Committee will review for approval the items discussed in closed session.

   * Requires full Board approval.
# Open Session Agenda

**FINANCE AND RESOURCE MANAGEMENT COMMITTEE**

Latham A/B, The Inn at Virginia Tech  
3:15 p.m.  
March 21, 2021

<table>
<thead>
<tr>
<th>Agenda Item</th>
<th>Reporting Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Welcome and Opening Remarks</td>
<td>Ed Baine</td>
</tr>
<tr>
<td>2. Consent Agenda</td>
<td>Ed Baine</td>
</tr>
<tr>
<td>a. Approval of Minutes of the November 16, 2020 Meeting</td>
<td></td>
</tr>
<tr>
<td>b. Update on University Debt Restructuring Initiatives</td>
<td></td>
</tr>
<tr>
<td>3. Update on Advancement</td>
<td>Charlie Phlegar</td>
</tr>
<tr>
<td>4. Update on University Cost Efficiencies</td>
<td>Dwayne Pinkney</td>
</tr>
<tr>
<td>5. Report on Actions Taken Under the Delegation of Authority and Policy</td>
<td>Ken Miller</td>
</tr>
<tr>
<td>4240 and the Corresponding Financial and Programmatic Impacts</td>
<td>Bryan Garey</td>
</tr>
<tr>
<td>* 6. Approval of Financial Plan to Close the Budget Gap Caused by the COVID-19 Pandemic</td>
<td>Ken Miller</td>
</tr>
<tr>
<td>* 7. Resolution for Approval of Transportation Services Fee Refund for Spring 2021</td>
<td>Ken Miller</td>
</tr>
<tr>
<td>♦ 8. Resolution for Approval of Tuition and Fee Rates for 2021-22</td>
<td>Dwayne Pinkney</td>
</tr>
<tr>
<td>a. Budget Development Overview</td>
<td>Ken Miller</td>
</tr>
<tr>
<td>b. Proposed Tuition and Fee Rates</td>
<td></td>
</tr>
<tr>
<td>* 9. Approval of 2021-22 Compensation for Graduate Assistants</td>
<td>Ken Miller</td>
</tr>
<tr>
<td>Tim Hodge</td>
<td></td>
</tr>
<tr>
<td>10. University’s Annual Financial Statements</td>
<td>Ken Miller</td>
</tr>
<tr>
<td>11. Intercollegiate Athletics Programs Report for Year Ended June 30, 2020</td>
<td>Ken Miller</td>
</tr>
<tr>
<td>* 12. Approval of Year-to-Date Financial Performance Report (July 1, 2020 – December 31, 2020)</td>
<td>Tim Hodge</td>
</tr>
<tr>
<td>Bob Broyden</td>
<td></td>
</tr>
<tr>
<td>13. Discussion of Future Agenda Topics and Closing Remarks</td>
<td>Ed Baine</td>
</tr>
</tbody>
</table>

* Requires full Board approval.  
♦ Discusses Enterprise Risk Management topic(s).
Briefing Report
FINANCE AND RESOURCE MANAGEMENT COMMITTEE

March 21, 2021

Open Session

1. Welcome and Opening Remarks

2. Consent Agenda: The Committee will consider for approval and acceptance the items listed on the Consent Agenda.
   
   a. Approval of Minutes of the November 16, 2020 Meeting: The Committee will review and approve the minutes of the November 16, 2020 meeting.

   b. Update on University Debt Restructuring Initiatives: The Committee will receive an update on the university’s debt restructuring initiatives.

3. Update on Advancement: University Advancement will provide a quarterly report on their fundraising efforts including an update on fundraising in fiscal year 2021, a giving day update, a campaign update, an overview of the strategies for meeting the 22 percent participation rate by 2022 goal, and the outlook for fundraising.

4. Update on University Cost Efficiencies: The Committee will receive an update on university cost efficiencies. This update provides an analysis of the university’s cost structure as compared to peer institutions across several established cost benchmarks and highlights recent university efficiency initiatives.


* 6. Approval of Financial Plan to Close the Budget Gap Caused by the COVID-19 Pandemic: The Committee will review for approval a financial plan to close the budget gap caused by the COVID-19 pandemic. This financial plan will close the $60.6 million operating gap identified and reported at the November 2020 Board of Visitors meeting, plus additional financial impacts of $2.6 million identified after the November 2020 Board meeting. The financial plan also includes an overview on the temporary authority granted by the commonwealth to mitigate the financial impacts of the pandemic and a summary of the key financial ratios the Auditor of Public

* Requires full Board approval.
♦ Discusses Enterprise Risk Management topic(s).
Accounts (APA) uses to determine the financial health of state institutions of higher education.

7. **Resolution for Approval of Transportation Services Fee Refund for Spring 2021:** The Committee will review for approval a resolution authorizing refunding of the 2021 Spring semester Transportation Services Fee to reflect the cost reduction from the Town of Blacksburg transit contract made possible by federal Coronavirus Aid, Relief, and Economic Security (CARES) Act support for transit service received by the town.

8. **Resolution for Approval of Tuition and Fee Rates for 2021-22:** The Committee will review for approval the proposed tuition and fee rates for 2021-22. The 2004 General Assembly authorized “The Board of Visitors . . . of institutions of higher education may set tuition and fee charges at levels they deem to be appropriate for all resident student groups based on, but not limited to, competitive market rates…” For 2021-22, the university proposes a 2.9 percent increase in tuition and mandatory educational and general (E&G) fee rates, reduced to a 2.1 percent increase with one-time relief provided by the state for in-state and out-of-state undergraduate students and graduate students, and for Virginia Tech Carilion School of Medicine students.

Consistent with this, the package proposes an increase of $238 to a total tuition and mandatory E&G fee rate of $11,658 for in-state undergraduate students and an increase of $624 to a total tuition and mandatory E&G fee rate of $30,584 for out-of-state undergraduate students.

For on-campus graduate students, this package proposes to increase tuition and mandatory E&G fees by $285 to a total rate of $13,986 for in-state students, and by $575 to a total rate of $28,189 for out-of-state students. For students of off-campus graduate programs, this package proposes to increase tuition and mandatory E&G fees by $316 to a total rate of $15,483 for in-state students, and by $615 to a total rate of $30,174 for out-of-state students.

For Virginia Tech Carilion School of Medicine Students, the university proposes an increase of $1,106 to a total tuition and mandatory E&G fee rate of $54,219.

Additionally, this package proposes to increase the tuition and mandatory E&G fees for Virginia/Maryland Veterinary Medicine students by $556 or 2.5 percent, reduced to a net increase of $399 or 1.8 percent with one-time relief, to a total tuition and mandatory E&G fee rate of $22,305. For out-of-state, non-Maryland students, the package proposes to increase the tuition and mandatory E&G fees by $1,024 or 2.0 percent, reduced to a net increase of $735 or 1.5 percent with one-time relief, to a total tuition and mandatory E&G fee rate of $51,170.

The university recommends an increase of $90 or 4.2 percent to total comprehensive fees for a total of $2,244 for in-state and out-of-state undergraduate and graduate students. An average

* Requires full Board approval.
◆ Discusses Enterprise Risk Management topic(s).
1.9 percent increase in room and board on the Blacksburg campus (2.2 percent average, including the Northern Virginia Gallery) is recommended.

9. **Approval of 2021-22 Compensation for Graduate Assistants:** The Committee will review and take action on the proposed 2021-22 schedule of stipends and support for the health insurance program for graduate students. To be competitive in the recruitment and retention of high-quality graduate students, it is important for the university to provide compensation packages that are comparable with those offered by peer institutions. Stipends proposed for 2021-22 are consistent with the 5.0 percent increase in state approved employee compensation plan. The key components of the graduate student compensation package include competitive stipends, tuition assistance, and health insurance.

10. **University’s Annual Financial Statements:** The Committee will receive an overview of the university’s annual financial statements for the fiscal year ending June 30, 2020.

The financial statements have been prepared in accordance with generally accepted accounting principles, and the Auditor of Public Accounts (APA) issued an unmodified (or clean) opinion. The APA reported three written audit comments for improving the timeliness of enrollment data to the National Student Loan Data System, strengthening the review process for preparation of the Schedule of Expenditures of Federal Awards, and improving the timeliness of grant closeout. The university is in the process of implementing corrective action plans to address these audit comments.

At June 30, 2020, the university had total net position of approximately $1.5 billion, an increase of $123.7 million or 8.9 percent since fiscal year 2019. Total unrestricted net assets increased by $15.2 million or 10.1 percent to negative $135.5 million.

Total revenues for fiscal year 2020 were $1.7 billion, an increase of $72.3 million or 4.5 percent over fiscal year 2019. This increase was due to student population growth, an increase in state appropriations, and an increase in capital grants and gifts.

Total operating expenses for fiscal year 2020 were $1.6 billion, an increase of $81.8 million or 5.6 percent. The increase was primarily in the compensation and benefits category and the scholarships and fellowships category, mainly due to emergency hardship support for students using the Coronavirus Aid, Relief, and Economic Security (CARES) Act funding. Increases in these areas were partially offset by savings in the supplies and materials and travel categories due to spending and travel restrictions in the latter portion of the year.

11. **Intercollegiate Athletics Programs Report for Year Ended June 30, 2020:** The Committee will receive a report on the Auditor of Public Accounts (APA) Intercollegiate Athletics Program review for fiscal year 2020. The APA performed certain agreed-upon procedures to evaluate
whether the Schedule of Revenues and Expenses of the Intercollegiate Athletics Program for fiscal year ended June 30, 2020, is in compliance with the National Collegiate Athletic Association (NCAA) bylaws. During the APA review, no matters were brought to the APA’s attention that would lead them to believe the amounts on the Schedule of Revenues and Expenses should be adjusted. This review does not constitute an audit and therefore no opinion is issued.

12. Approval of Year-to-Date Financial Performance Report (July 1, 2020 – December 31, 2020): The Committee will review for approval the Year-to-Date Financial Performance Report for July 1, 2020 – December 31, 2020. For the second quarter, budget adjustments were made to reflect revisions to projected revenues and expenditures. The University Division budget was increased by $5.7 million due to the Commonwealth of Virginia’s second Coronavirus Relief Funding, $4 million for additional General Fund support for COVID-19 impacts, and $1.5 million for the establishment of the Virginia Tech Animal Laboratory Services (ViTALS). The Auxiliary Enterprises continue to work through short-term and long-term budget impacts of the COVID-19 pandemic, with an additional revenue decrease of ($5.8 million) from the first quarter. Additionally, the Auxiliary Enterprise budget was increased for $7.6 million Coronavirus Relief Fund Allocation from the commonwealth.

The Auxiliary Enterprises are experiencing expense savings due to the essential spending order and decreased business volume. Additional adjustments are anticipated in the third quarter of fiscal year 2021 to further align the budget for additional financial impacts of the pandemic.

Through the quarter ending December 31, 2020, $40.2 million was expended for Educational and General capital projects, and $41.9 million was expended on Auxiliary Enterprises capital projects. Cumulative capital outlay expenditures through the quarter ending December 31, 2020 totaled $82.1 million.

13. Discussion of Future Agenda Topics and Closing Remarks: The Committee will discuss possible topics for future meetings and other topics as needed.
<table>
<thead>
<tr>
<th>Agenda Item</th>
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</thead>
<tbody>
<tr>
<td>* 1. Approval of the 2022 – 2028 Capital Outlay Plan</td>
<td>Ken Miller, Bob Broyden</td>
</tr>
<tr>
<td>2. Financial Considerations of the Virginia Tech 2020 Climate Action Commitment</td>
<td>Dwayne Pinkney</td>
</tr>
<tr>
<td>* 3. Approval of the Virginia Tech 2020 Climate Action Commitment</td>
<td>Dwayne Pinkney</td>
</tr>
</tbody>
</table>

* Requires full Board approval.

♦ Discusses Enterprise Risk Management topic(s).
Joint Open Session

1. Approval of the 2022-2028 Capital Outlay Plan: The Committees will review for approval the 2020-2028 Capital Outlay Plan. The university prepares an updated Six-Year Capital Outlay Plan every two years as part of its normal planning and budgeting cycle. The Plan is a critical component of positioning the university for state support of major Educational and General projects and for advancing high priority projects that may be funded entirely with nongeneral fund resources. The next state capital outlay plan will be for 2022-2028 and will be established in the 2022 budget development process. Traditionally, the state requires each institution to submit a capital plan in June of the year before a new biennium begins. Based on that timetable, a plan from the university for 2022-2028 will be due to the state in June of 2021.

Preliminary work has been done to identify potential projects for inclusion in the 2022-2028 Capital Outlay Plan in anticipation of future guidance and instructions from the state. These projects are consistent with programmatic needs established for the planning period and with the strategic plan of the university, and they position the university with options to respond to guidance from the state.

Since the submission date for the new Plan may occur before the June 2021 Board of Visitors meeting, the university is requesting the review and approval of the list of potential projects for inclusion in the 2022-2028 Capital Outlay Plan. The university will provide an update to the status of the 2022-2028 Plan at a future Board of Visitors meeting.

2. Financial Considerations of the Virginia Tech 2020 Climate Action Commitment: The Committees will receive a presentation on the financial considerations of the Virginia Tech 2020 Climate Action Commitment. A highly collaborative cross-divisional team worked to identify the financial impacts to achieve each prescribed pathway of the updated commitment. The team worked to analyze the economics and financial impacts of each initiative in depth and offer potential.

While detailed and comprehensive, the analysis is based on assumptions regarding technologies, costs, and policies for the future that are uncertain. Current developments and future projections in energy markets and in state and federal energy policy indicate that future values of those assumptions – while
uncertain now – may become more favorable for cost-effective implementation of the updated commitment. These evolving factors will be monitored and incorporated into five-year revisions in 2025 and 2030. In addition, the updated commitment requires an annual report of progress. That annual report will evaluate the assumptions and actual costs and/or savings of the commitment’s implementation. No specific funding decisions are to be made at this time. Funding requests will be incorporated into annual operating/capital budgeting processes. All financial needs compete for resources while considering tuition/fee constraints and university debt capacity.

3. Resolution to Approve the Virginia Tech 2020 Climate Action Commitment:
   The Committees will review for approval a resolution on the Virginia Tech 2020 Climate Action Commitment. Approved initially in 2009 by the Board of Visitors and revised in 2013, the Virginia Tech Climate Action Commitment serves as the university’s guiding framework around sustainability and energy efficiency in campus operations, facilities, curriculum, and research.

   In late 2019, President Sands called for its renewal and revision to ensure the most stringent climate and sustainability standards are implemented as the university continues to grow and seeks to be a leader in environmental stewardship. The mission of the revised commitment is to achieve carbon neutrality by changing our physical infrastructure, collective and individual behaviors, and educational mission; to engage everyone in creating a culture of sustainability; and to achieve these objectives through just and equitable means.

   A working group of faculty experts, governance representatives, students, operations professionals, and community members led this charge and crafted the revision. Through participation in working group and subcommittee meetings, brainstorming sessions, and community engagement events, students involved in the revision process had countless opportunities to gain practical sustainability experience. Senior vice president and chief business officer, Dwayne Pinkney, sponsored the initiative. The work group was chaired by John Randolph, professor emeritus of urban affairs and planning, and co-chaired by Todd Schenk, assistant professor of urban affairs and planning and member of the Commission on Faculty Affairs.

   On an aggressive timeline, the revision moved through university governance this fall, receiving approval from the Energy and Sustainability Committee, Commission on University Support, and the University Council. It was endorsed by the Faculty and Staff Senates, the Student Government Association, and the Graduate Student Assembly. The Board received a preview of the updated Climate Action Commitment at its November 2020 meeting.

   * Requires full Board approval.
   ♦ Discusses Enterprise Risk Management topic(s).
In November 2020, the university provided the Board of Visitors with an update on the financial impact of the COVID-19 pandemic on the campus budget as determined during the Fall semester and as projected for the 2020-21 fiscal year. The impact across campus was uneven, with the primary impact on self-generated revenue activities in Auxiliary Enterprises due to the university’s response to ensure the safety and well-being of the campus community. This identified a $63.2 million operating gap. Subsequently, the university has developed a plan for closing this budget gap and recommends approval by the Board.

While the university worked diligently to minimize the financial impact, the university was open and operating. Efforts to minimize impact spanned cost control efforts to philanthropy (Athletics). The impact is summarized below:

<table>
<thead>
<tr>
<th>2020-21 Auxiliary Enterprise Budget Gap Due to the COVID-19 Pandemic as of December 31, 2020</th>
<th>Net (Dollars in Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dining</td>
<td>-$23.2</td>
</tr>
<tr>
<td>Athletics</td>
<td>-19.1</td>
</tr>
<tr>
<td>Residential</td>
<td>-8.9</td>
</tr>
<tr>
<td>Inn at VT: Hotel &amp; Conference Center</td>
<td>-4.6</td>
</tr>
<tr>
<td>Electric Service</td>
<td>-1.6</td>
</tr>
<tr>
<td>Parking &amp; Fleet Services</td>
<td>-1.8</td>
</tr>
<tr>
<td>Health Services</td>
<td>-1.3</td>
</tr>
<tr>
<td>Other Units (Steger Center, Printing, Center for Arts, Library Photocopy, Licensing/Trademark)</td>
<td>-2.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>-$63.2</strong></td>
</tr>
</tbody>
</table>

Recognizing the financial challenges faced by public universities, the Commonwealth of Virginia provided temporary authority for the 2020-22 biennium impacts caused by the COVID-19 pandemic during the 2020 sessions. This allowed a reduction of the recovery of the indirect cost of Auxiliary Enterprise programs. In addition, it authorized the use of other fund sources as approved by the Board of Visitors after having reviewed the measure of financial status in the most recent Auditor of Public Accounts (APA) Higher Education Comparative Report. The use of other fund sources is limited to scholarship support for Intercollegiate Athletics. The resolution is to be shared with the Chairs of the...
House Appropriations and Senate Finance and Appropriations Committees. See Attachment A for the complete text of these new temporary authorities. The university’s recommended financial plan complies with these requirements as explained below.

The decrease in revenues and expenses is due to the reduction of business activities as a result of COVID-19. A portfolio of strategies was developed to minimize the impact on the university’s finances. The plan is summarized below:

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Amount (Dollars in Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Support</td>
<td></td>
</tr>
<tr>
<td>CARES Act (via Commonwealth of Virginia)</td>
<td>$ 10.7</td>
</tr>
<tr>
<td>2nd Stimulus (Consolidated Appropriation Act)</td>
<td>18.1</td>
</tr>
<tr>
<td>State Support</td>
<td>4.0</td>
</tr>
<tr>
<td>Restructuring of Existing Debt (FY21)</td>
<td>10.8</td>
</tr>
<tr>
<td>One-time Savings (health insurance holiday)</td>
<td>4.8</td>
</tr>
<tr>
<td>Relief from Institutional Indirect Cost Assessments</td>
<td>13.9</td>
</tr>
<tr>
<td>Expenditure Savings/Cost Control</td>
<td>0.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$ 63.2</strong></td>
</tr>
</tbody>
</table>

The APA’s comparative report is lengthy and is included as Attachment C to the detailed report supporting the resolution. Attachment B includes a summary of just the financial ratios included in the report to assist in the overall review.

Although the original intent of the APA report was to enable the state legislature to get an overview of the financial health of all state institutions of higher education, the new Board of Visitors review requirement was intended to focus the Board’s attention on the financial health of their respective institutions and the potential financial impact of the funding plan to assist their auxiliaries.

The report shows numerous financial ratios for fiscal years 2015, 2016, and 2017 and provides explanations and context for the ratios. Additionally, it includes the composite financial index (CFI) (with and without the institution's foundations), which is a weighted average of four of these core ratios. A CFI score greater than or equal to 3.0 generally indicates that an institution is financially healthy. The report indicates that reviewing trends in the CFI over time helps to adjust for the impact of significant one-time events that may disproportionately impact a ratio in a given year. The CFI is also used by the Southern Association of Colleges and Schools, Commission on Colleges during their accreditation reviews of the university.
As shown in more detail in the presentation related to the university’s financial statements, the university demonstrates financial health compared to the benchmarks, if applicable, for the core financial ratios and the CFI.

### Key Financial Ratios of Financial Health Cited in APA Comparative Report

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Reserve</td>
<td>Snapshot of the financial strength and flexibility of an institution calculated by dividing expendable net assets by total expenses. The accepted benchmark for this ratio is 0.4.</td>
</tr>
<tr>
<td>Viability</td>
<td>Availability of expendable net position to cover long-term debt and indicates whether an institution can assume new debt calculated by dividing expendable net assets by long-term debt. The accepted benchmark for this ratio is 1.0 or greater.</td>
</tr>
<tr>
<td>Net Operating Revenue</td>
<td>Indicates whether an organization is living within its available resources calculated by dividing net income less capital revenues by noncapital revenues.</td>
</tr>
<tr>
<td>Return on Net Position</td>
<td>Answers whether the university is achieving a positive economic return on its investment of resources calculated by dividing change in net assets by total net assets.</td>
</tr>
</tbody>
</table>

Consistent with the Auditor of Public Accounts report, the impacts of Pension and Other Post Employment Benefits have been excluded.

Measuring the Overall Level of Financial Health

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Presentation Date: March 21, 2021
Variations of these ratios and numerous other ratios and qualitative factors are also used by the bond rating agencies when assessing the financial health of the university. The recently affirmed ratings of Aa1 from Moody’s and AA from Standard & Poor’s with a stable outlook provide additional confirmation of the university’s financial health.

Given the financial strength of the university and the fact that the majority of the solutions to fund the above budget gaps or operating deficits are from new one-time resources, it is anticipated that the implementation of the plan will have only a marginal impact on the financial health of the university.

Moving forward, the university will continue to monitor and manage the financial impacts created by the COVID-19 pandemic on university operations and bring updates back to the Board of Visitors as needed. As the details of the plan are implemented, some limited temporary reductions in reserve balances, which will be scheduled to be repaid in future years, or internal loans may need to be considered for a portion of the plan not funded from one-time sources.
RESOLUTION APPROVING THE FINANCIAL PLAN TO CLOSE THE BUDGET GAP CAUSED BY THE COVID-19 PANDEMIC

WHEREAS, the COVID-19 pandemic had significant impact on the university’s Auxiliary Enterprise financial operations; and,

WHEREAS, the university shared the impact, as understood during Fall 2020, with the Board of Visitors at the November 2020 meeting; and,

WHEREAS, this identified a $63.2 million budget gap in the Auxiliary Enterprises for fiscal year 2020-21; and,

WHEREAS, § 3-4.01 item 3 of Chapter 1283 and Chapter 56 of the Virginia Acts of Assembly allows institutions to forego the collection of full indirect cost; and,

WHEREAS, § 3-4.01 item 4 of Chapter 56 of the Virginia Acts of Assembly requires Board of Visitors approval of such funding plan; and

WHEREAS, the university has identified a plan for closing this budget gap using primarily new one-time resources and the new legislative authorities mentioned above, and therefore the plan is anticipated to have limited impact on the financial health of the university;

NOW THEREFORE BE IT RESOLVED, that the university’s plan for closing the budget gap created by the pandemic be approved.

RECOMMENDATION:

That the resolution approving Virginia Tech’s financial plan to close the budget gap created by the COVID-19 pandemic be approved.

March 22, 2021
RESOLUTION FOR APPROVAL OF TRANSPORTATION SERVICES FEE REFUND FOR SPRING 2021

FINANCE AND RESOURCE MANAGEMENT COMMITTEE

January 31, 2021

The Town of Blacksburg received federal support through the Coronavirus Aid, Relief, and Economic Security (CARES) Act to support the cost of mass transit during the COVID-19 pandemic. This support provides relief to the Town of Blacksburg’s Blacksburg Transit system, which Virginia Tech students, staff, and faculty rely on. As a result of this support, the Town of Blacksburg has lowered the university’s contractual contribution for the 2020-21 fiscal year. This support will allow the university to reduce the Transportation Services Fee paid by students on the Blacksburg campus. The approved Transportation Services fee for Spring 2021 for regular full-time students on the Blacksburg campus is $96, while part-time students and students in different statuses pay a reduced amount. Given that the 2020-21 Transportation Services fee was approved by the Board of Visitors in June 2020 and has been assessed for the spring semester, the university, with concurrence from the Town of Blacksburg, recommends refunding the main campus Transportation Services Fee for Spring semester 2021.

RECOMMENDATION:

That the university refund the 2021 spring semester Transportation Services Fee to reflect the cost reduction from the Town of Blacksburg transit contract made possible by federal CARES Act support for transit service received by the town.

March 22, 2021
Proposed Tuition and Fee Rates for 2021-22

FINANCE AND RESOURCE MANAGEMENT COMMITTEE

March 9, 2021

Development of 2021-22 Tuition and Fee Rates

The university has traditionally developed tuition and fee proposals in February and March of each year, with final rates submitted to the Board of Visitors in late March or April. This process allows the university to incorporate the impact of legislative actions taken during the General Assembly session into the tuition and fee proposals. Finalizing these rates at the Spring Board of Visitors meeting helps students plan for the financial costs of the upcoming academic year and allows the Office of University Scholarships and Financial Aid to deliver timely and effective financial aid award information to current and prospective students.

The 2021 General Assembly session adjourned on March 1st, 2021, passing amendments to the 2020-22 biennial budget for final approval by the Governor. Though the impacts of the COVID-19 pandemic continue to strain the nation, the commonwealth has thus far avoided reducing its support for Virginia Tech and has provided some additional resources to help offset some of the costs borne by the university. The General Assembly also provided a one-time allocation of General Fund support that will allow the university to provide one-time relief equivalent to 28.2% of the previously estimated tuition increases for most student categories for 2021-22. With an understanding of the major revenue and cost changes resulting from the amended state budget, the university recommends the following tuition and fee adjustments to address the university’s estimated 2021-22 resource needs.

Attached Schedules 1–7 provide a summary of all tuition and fee rates proposed for 2021-22, including any increase/decrease from the prior year.

Impact of Student Financial Aid Programs

As reported to the Board in November 2020, the university maintains a robust student financial aid program to ensure access and affordability of the institution’s programs. Consistent with this goal, it is important to remember that the proposed charges represent the gross amount assessed to students and may be offset by one of the university’s various financial assistance programs. This includes the Funds for the Future program, which shelters returning undergraduate students from tuition and fee increases for families with incomes up to $100,000, and new investments that expand the overall student financial aid program. The university continues to make strategic investments into student financial aid programs that support low- to middle-income students and support enrollment management strategies.

Tuition

The defined state process envisions utilizing the Six-Year Financial Plans that are developed in accordance with state guidelines and approved by the Board as the framework for the development of tuition and Educational & General (E&G) fees, given certain assumptions about General Fund support provided by the General Assembly. However, development of tuition and fee recommendations for the coming year must consider the actual level of support proposed by
the commonwealth and nongeneral fund cost assignments when available. The university has worked to balance these criteria in developing the proposed annual base tuition rates, including the state’s allocation of one-time General Fund support that will allow the university to provide rate increase relief to most student categories in 2021-22, as seen in the following tables. The proposed full-time annual 2021-22 rates are shown below. The one-time relief reduces the 2.9% base rate increase to a 2.1% increase. Semester rates equal one-half of annual rates.

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
<th>Proposed 2021-22 Net of One-time Relief</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Undergraduate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>$11,420</td>
<td>$11,751</td>
<td>$11,658</td>
</tr>
<tr>
<td>Nonresident</td>
<td>29,960</td>
<td>30,829</td>
<td>30,584</td>
</tr>
<tr>
<td><strong>Graduate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-campus Programs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>13,701</td>
<td>14,098</td>
<td>13,986</td>
</tr>
<tr>
<td>Nonresident</td>
<td>27,614</td>
<td>28,415</td>
<td>28,189</td>
</tr>
<tr>
<td>Off-campus Programs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>15,167</td>
<td>15,607</td>
<td>15,483</td>
</tr>
<tr>
<td>Nonresident</td>
<td>29,559</td>
<td>30,416</td>
<td>30,174</td>
</tr>
</tbody>
</table>

**Part-Time Students**

Part-time tuition charges for all student categories are derived from the full-time rate and are directly related to the number of credit hours taken. For tuition calculation purposes, the full-time undergraduate semester rate is divided by twelve credit hours and the full-time graduate student semester rate is divided by nine hours. The proposed per-hour charges for 2021-22 are:

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
<th>Proposed 2021-22 Net of One-time Relief</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Undergraduate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>$475.75</td>
<td>$489.75</td>
<td>$485.75</td>
</tr>
<tr>
<td>Nonresident</td>
<td>1,248.25</td>
<td>1,284.50</td>
<td>1,274.25</td>
</tr>
<tr>
<td><strong>Graduate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-campus Programs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>761.25</td>
<td>783.25</td>
<td>777.00</td>
</tr>
<tr>
<td>Nonresident</td>
<td>1,534.00</td>
<td>1,578.50</td>
<td>1,566.00</td>
</tr>
<tr>
<td>Off-campus Programs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>842.50</td>
<td>867.00</td>
<td>860.00</td>
</tr>
<tr>
<td>Nonresident</td>
<td>1,642.25</td>
<td>1,689.75</td>
<td>1,676.25</td>
</tr>
</tbody>
</table>
Special Tuition Rates

Summer and Winter Session Rate

The Higher Education Opportunity Act of 2011 outlines several objectives that seek to expand access to and promote degree completion across the commonwealth's higher education system. During non-traditional academic time periods, increasing year-round utilization of facilities and advancing opportunities for degree completion is an important strategy for supporting these objectives. To position the university for continued innovation in non-traditional session enrollment growth, in 2012-13 the university shifted the assessment of undergraduate tuition to a per-credit hour basis at a ten percent discount of the regular session hourly rates for on-campus students. The university proposes to continue this assessment methodology for the 2021-22 Winter and Summer sessions. This approach provides a financial incentive for students to complete their degree at an accelerated pace and offers improved flexibility for faculty to innovate academic offerings during these non-traditional sessions. The proposed per-hour charges for Winter 2021 and Summer 2022 are:

<table>
<thead>
<tr>
<th>Undergraduate Charge</th>
<th>2020-21</th>
<th>Proposed</th>
<th>2021-22</th>
<th>Proposed</th>
<th>2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident</td>
<td>$428.25</td>
<td>$440.75</td>
<td>$437.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonresident</td>
<td>$1,123.00</td>
<td>$1,156.00</td>
<td>$1,146.75</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Veterinary Medicine

When the Virginia-Maryland Regional College of Veterinary Medicine was formed, the two states agreed to provide equal contributions (per Virginia and Maryland student) to the instructional operating budget. It was also agreed that both Virginia and Maryland students would pay the same resident tuition rate. The tuition agreement has been sustained since the first class was admitted.

Until 1996-97 only residents of Virginia and Maryland were admitted for study in the professional veterinary medicine curriculum. In 1996-97, the enrollment policy was modified to admit nonresident students (i.e. non-Virginia and non-Maryland residents). This change did not affect the enrollment totals for Virginia or Maryland. For 2021-22, the enrollment plan envisions 40 nonresident students in the entering cohort.

Each year the tuition proposal is reviewed with the Virginia-Maryland Regional College of Veterinary Medicine Budget and Program Review Board (established to review the college's budget and comprised of representatives from Virginia Tech and the University of Maryland). The university, in conjunction with the Budget and Program Review Board, proposes the following increases of 2.5% and 2.0% in the resident and nonresident tuition rates for veterinary medicine students for 2021-22. The commonwealth's one-time relief reduces the rate increases to 1.8% and 1.5% respectively. The current and proposed annual tuition rates are displayed below:

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>Proposed</th>
<th>2021-22</th>
<th>Proposed</th>
<th>2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virginia/Maryland Students</td>
<td>$21,906</td>
<td>$22,462</td>
<td>$22,305</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonresident Students</td>
<td>$50,435</td>
<td>$51,459</td>
<td>$51,170</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Virginia Tech Carilion School of Medicine

Integrated as the ninth college of Virginia Tech on July 1, 2018, the Virginia Tech Carilion School of Medicine is funded through a combination of medical student tuition and partnership support. The one-time relief reduces the 2.9% base rate increase to a 2.1% increase. The current and proposed annual tuition rates are displayed below:

<table>
<thead>
<tr>
<th></th>
<th>Proposed 2020-21</th>
<th>Proposed 2021-22</th>
<th>Proposed 2021-22 Net of One-time Relief</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Education</td>
<td>$ 53,113</td>
<td>$ 54,653</td>
<td>$ 54,219</td>
</tr>
</tbody>
</table>

Program Specific Online Graduate Tuition Rates

For select online graduate programs with significant demand beyond the commonwealth’s borders and the capacity for growth, the university has developed a tiered set of tuition rates that apply to all students in each program. These rates ensure coverage of the direct and indirect cost of instruction and satisfy state policy requiring that nonresident students be assessed at least the average cost of education. This rate structure is organized into four tiers; market assessment and review of program costs determine each program’s rate tier. Students are also assessed the traditional mandatory E&G fees (Library and Technology). As completely online programs, students are not assessed the Commonwealth Facility and Equipment Fee. As a self-supporting program, the 2021-22 one-time relief program is not applicable.

The proposed per-credit hour tiered tuition rates and the approved programs in each tier are summarized below:

<table>
<thead>
<tr>
<th>Program Specific Online Graduate Tuition</th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 Rate</td>
<td>N/A</td>
<td>$ 1,075.00</td>
</tr>
<tr>
<td>Online Master of Business Administration (OMBA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tier 2 Rate</td>
<td>$ 975.00</td>
<td>$ 1,000.00</td>
</tr>
<tr>
<td>Master of Information Technology (MIT)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master of Agricultural &amp; Applied Economics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tier 3 Rate</td>
<td>900.00</td>
<td>925.00</td>
</tr>
<tr>
<td>Master of Natural Resources (MNR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master of Agriculture and Life Sciences (OMALS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tier 4 Rate</td>
<td>825.00</td>
<td>850.00</td>
</tr>
<tr>
<td>Graduate Certificate in Local Government Mgt (LGMC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Certificate in Leadership for an Aging Society (ASCC)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) Rate effective beginning Summer semester 2021.
Professional Masters and Certificate Pricing

To support the strategic goal of increasing the number of students enrolled in professional graduate degree and certificate programs, specifically at sites outside of the Blacksburg campus, the university proposes continuing the development of market-based pricing strategies in select programs. Programs eligible for these pricing strategies will display market demand that extends beyond the commonwealth and generate net revenue above the direct and indirect cost of instruction (therefore, above the average cost of education). In some cases, a program-specific supplemental fee may also be approved.

The specific programs listed below are approved to utilize a market-based residency-neutral tuition rate that achieves the average cost of education and improves the program’s ability to recruit participants from beyond the commonwealth. As a self-supporting program, the 2021-22 one-time relief program is not applicable. For 2021-22, the following rates are proposed to be assessed on a per-credit basis for all enrolled credits:

<table>
<thead>
<tr>
<th>Program</th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evening MBA (EvMBA)</td>
<td>$1,025.00</td>
<td>$1,050.00</td>
</tr>
<tr>
<td>Data Analysis and Applied Statistics (DAAS)</td>
<td>1,025.00</td>
<td>1,050.00</td>
</tr>
<tr>
<td>M.S. Business Analytics – HTM</td>
<td>N/A</td>
<td>1,050.00</td>
</tr>
<tr>
<td>XMNR (Spring 2022 cohort)</td>
<td>N/A</td>
<td>1,050.00</td>
</tr>
</tbody>
</table>

Special Tuition Rate for Elementary and Secondary School Personnel

The original policy regarding special tuition rates for elementary and secondary school personnel was approved in 1984 and allowed public school teachers to attend graduate classes at Virginia Tech on a reduced tuition schedule for purposes of recertification. Recertification is a statewide requirement that can strengthen the total education system. The original policy underscored the university’s commitment to improving the quality of elementary and secondary education through the continued education of elementary and secondary school teachers.

In January 1989 the Board of Visitors approved a revised policy. Teachers, counselors, administrators, and supervisors employed by elementary and secondary school systems in the Commonwealth of Virginia could enroll in graduate classes, both on-campus and at off-campus locations, and pay approximately 60 percent of the authorized tuition rate. The Board of Visitors also expanded the policy in two ways: First, all elementary and secondary school personnel became eligible for the reduced tuition rate. Second, all graduate hours qualify for the plan, not just recertification hours. Further, elementary and secondary school personnel may enroll in an unlimited number of graduate courses for the purpose of recertification or for an advanced degree.

In February 1999 the Board of Visitors approved an expansion of the special tuition rate to include undergraduate-level courses for vocational teachers who do not have a bachelor’s degree.

In 2015-16, the Board of Visitors established a 25 percent discount, resulting in a special tuition rate for elementary and secondary school personnel of 75 percent of the corresponding campus tuition rates (excludes professional and executive programs). Continuing the 25 percent discount for 2021-22 is recommended.
The following table shows the proposed special rates for Elementary and Secondary School Personnel per-credit hour for 2021-22 Virginia residents:

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Undergraduate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-campus</td>
<td>$ 357.00</td>
<td>$ 367.25</td>
<td>$ 364.25</td>
</tr>
<tr>
<td><strong>Graduate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-campus</td>
<td>571.00</td>
<td>587.50</td>
<td>582.75</td>
</tr>
<tr>
<td>Extended Campus</td>
<td>632.00</td>
<td>650.25</td>
<td>645.00</td>
</tr>
</tbody>
</table>

**Special Tuition Rate for Study-Abroad Programs**

Providing study-abroad opportunities is an important strategy in strengthening Virginia Tech’s international programs. The Board of Visitors previously approved a special tuition rate for students who participate in the various study-abroad programs operated by the university. The special tuition rate reflects instructional services that all students receive, but excludes the cost of on-campus services.

In 2008-09 the study abroad rate was 80 percent of the on-campus tuition rates. The university proposes to continue the special tuition rate for study-abroad programs. Consistent with prior years, the special tuition rate for study abroad would not apply for students studying at the Steger Center for International Scholarship.

The following table shows the proposed special rates for study-abroad programs per-credit hour for 2021-22:

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Undergraduate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>$ 381.00</td>
<td>$ 391.75</td>
<td>$ 388.75</td>
</tr>
<tr>
<td>Nonresident</td>
<td>999.00</td>
<td>1,027.50</td>
<td>1,019.50</td>
</tr>
<tr>
<td><strong>Graduate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>609.00</td>
<td>626.50</td>
<td>621.50</td>
</tr>
<tr>
<td>Nonresident</td>
<td>1,227.00</td>
<td>1,262.75</td>
<td>1,252.75</td>
</tr>
</tbody>
</table>

**Special Tuition Rate for Graduate Candidacy Status**

To recognize the largely independent nature of doctoral students who have completed two years of course work, passed their preliminary exam, and are engaged in research and dissertation efforts, the university recommends a new lower tuition rate for research and dissertation hours for students in this status. Candidacy Status is conferred upon application to and certification by the Graduate School that a student has completed two years of course work and passed their preliminary exam. A reduced tuition rate for Candidacy Status is intended to incentivize time-to-degree for Ph.D. students, minimize the cost to research programs, and better position the university within the competitive market. As an incentive to graduate, the rate is available for a maximum of two years for full-time students. This rate does not apply to executive graduate
programs. The tuition rates for research and dissertation hours will be discounted 10 percent. The special tuition rate per credit hour for Candidacy Status is displayed below:

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Resident Blacksburg</td>
<td>N/A</td>
<td>$705.00</td>
</tr>
<tr>
<td>Graduate Nonresident Blacksburg</td>
<td>N/A</td>
<td>1,420.75</td>
</tr>
<tr>
<td>Graduate Resident Extended Campus</td>
<td>N/A</td>
<td>780.25</td>
</tr>
<tr>
<td>Graduate Nonresident Extended Campus</td>
<td>N/A</td>
<td>1,520.75</td>
</tr>
</tbody>
</table>

**Educational and General Fees**

**Technology Service Fee**

In accordance with the language in the 1998 Appropriation Act, the university implemented an Educational and General technology service fee effective with the 1998 fall semester for all students. The fee is currently $76 per academic year. Part-time students pay half the full-time rate. A $2 increase to the Technology Services Fee is recommended for 2021-22.

**Library Fee**

Beginning in Fall 2013, the university instituted an annual fee to support a robust scholarly environment to advance academic achievement. The Library Fee supports comprehensive library resources, online access to library resources for enrolled students, and enhancements to student library services. The fee is currently $99 per year. Part-time students pay half of the full-time rate. A $3 increase to the Library fee is recommended for 2021-22.

**Commonwealth Facility and Equipment Fee**

The 2003 General Assembly required the establishment of a capital fee to be assessed to all nonresident students at institutions of higher education for 2003-04 to pay a portion of the debt service on bonds issued under the 21st Century Debt Program issued for construction of new facilities on campus. The 2004 General Assembly increased the nongeneral fund portion of lease payments for the 2004-06 allocation of equipment under the Higher Education Equipment Trust fund and stipulated the source of the nongeneral funds be an increase in fees for nonresident students at public institutions of higher education starting in 2005-06. Part-time students pay half the full-time rate. The Commonwealth Facility and Equipment fee of $604 is assessed to all nonresident students. No change in the Commonwealth Facility and Equipment fee is proposed for 2021-22.

**Immigration Services Fee**

To support the administrative costs and maintain the quality of immigration services provided to degree-seeking undergraduate and graduate international students, the university implemented an Immigration Services Fee beginning with students enrolling in Fall 2018. This fee helps support costs uniquely associated with the administration of international student enrollment such as academic and financial verification, immigration regulation, Student and Exchange Visitor Program System (SEVIS) reporting requirements, financial processing fees, and compliance with United States Government regulations. International students on a domestic campus are
assessed the fee. For international Graduate students on assistantship, the fee is remitted under Section 4-2.01b.6 of the Virginia Appropriation Act in recognition of their service to the University. The Immigration Services fee of $275 per semester is assessed to all degree-seeking students on a Type F or Type J visa. No change in the fee is recommended for 2021-22.

**Average Cost of Education**

The Commonwealth of Virginia has a well-established methodology for computing the per student educational cost for colleges and universities. This process identifies the average educational cost for all undergraduate and graduate students, including part-time and full-time students taking classes at both on-campus and off-campus locations. The Average Cost of Education does not include professional programs such as veterinary medicine.

Until 2004, the Average Cost of Instruction was utilized as the measure of per student instructional cost. The Average Cost of Instruction identified the instructional cost components within the Educational and General appropriation and computed an average instructional cost. In 2004, a new state policy replaced the Average Cost of Instruction with the Average Cost of Education. The Average Cost of Education is the instructional funding need generated by the base budget adequacy model. The Average Cost of Education is not comparable to the Average Cost of Instruction due to the differences in methodology.

The Average Cost of Education now serves as the basis for ensuring that nonresident undergraduate and graduate students cover at least 100 percent of the average cost of their education as the General Assembly instructed colleges and universities in the 1991 legislative session. Nonresident tuition and mandatory E&G fee rates for the upcoming academic year are examined against the Average Cost of Education in the prior year to insure they cover 100 percent of the Average Cost of Education. Commonwealth policy continues to allow the university to recover the full cost from nonresidents as a group.

Because the State Council of Higher Education for Virginia does not compute the Average Cost of Education until July, the following table presents Virginia Tech’s estimate of the Average Cost of Education and coverage percentages by student category for 2020-21. The Average Cost of Education is estimated to be $20,803. The proposed Virginia Tech nonresident tuition and mandatory E&G fees are 145 percent of the Average Cost of Education and are in compliance with state tuition policy. Average percentages of the Cost of Education by individual student category are summarized in the following schedule.

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Amount</th>
<th>2020-21 % of Average</th>
<th>2021-22 Estimate Amount</th>
<th>2021-22 Estimate % of Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Average Cost of Education</td>
<td>$20,289</td>
<td>57%</td>
<td>$20,803</td>
<td>57%</td>
</tr>
<tr>
<td>Undergraduates*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residents</td>
<td>11,595</td>
<td>57%</td>
<td>11,838</td>
<td>57%</td>
</tr>
<tr>
<td>Nonresidents</td>
<td>30,135</td>
<td>149%</td>
<td>30,764</td>
<td>148%</td>
</tr>
<tr>
<td>Graduates*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residents</td>
<td>13,876</td>
<td>68%</td>
<td>14,166</td>
<td>68%</td>
</tr>
<tr>
<td>Nonresidents</td>
<td>27,789</td>
<td>137%</td>
<td>28,369</td>
<td>136%</td>
</tr>
</tbody>
</table>

* indicates that the percentage is based on the average cost of education, not on the total cost of education.
Residency
Residents  58%  58%
Nonresidents  145%  145%

* Amounts include proposed tuition and E&G fees. The nonresident facility and equipment fee is not comparable to the Average Cost of Education.

Excess Credit Hour Surcharge

The 2006 General Assembly (§ 23.1-509 Code of Virginia) required the establishment of a surcharge to be assessed to all resident undergraduate students beginning in the semester after 125 percent of credit hours required for baccalaureate degrees have been completed.

This applies to students entering on or subsequent to August 1, 2006. The surcharge amount is the difference between the Average Cost of Education and the in-state undergraduate tuition and mandatory E&G fees. In effect, the surcharge requires the in-state student to pay the Average Cost of Education once they have exceeded 125 percent of degree requirements.

The following table displays the actual 2020-21 surcharge amount and an estimated surcharge amount for 2021-22 based on Virginia Tech’s estimate of the Average Cost of Education for 2021-22 and the proposed 2021-22 tuition and mandatory E&G fees included in this package.

<table>
<thead>
<tr>
<th>2020-21 Charge</th>
<th>Estimated 2021-22*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Cost of Education</td>
<td>$20,289</td>
</tr>
<tr>
<td>In State Undergraduate Tuition and E&amp;G Fees</td>
<td>11,595</td>
</tr>
<tr>
<td>Surcharge-Annual</td>
<td>8,694</td>
</tr>
<tr>
<td>Surcharge Per Credit Hour</td>
<td>$362.25</td>
</tr>
</tbody>
</table>

*The Average Cost of Education for 2021-22 is an estimated value pending SCHEV’s computation in July 2021.

Comprehensive Fee

The Student Activity Fee, the Health Service Fee, the Athletic Fee, the Transportation Services Fee, the Recreational Sports Fee, the Student Services Fee, and the Student Cultural Activities Fee are consolidated into one Comprehensive Fee in order to streamline the process for collecting and accounting for these charges. The $2,154 per student fee is the lowest Comprehensive Fee charged by any public four-year institution in Virginia in 2020-21. Comprehensive fees at the other five public doctoral institutions range from $2,451 to $6,058. Individual descriptions and recommended amounts for 2021-22 are below for each component of the Comprehensive Fee. Part-time students pay one-half of each fee.
Student Activity Fee

The Student Activity Fee covers the maintenance and operation of the student centers, student programs, and supports student activities as determined by the Student Budget Board. Cost pressures for 2021-22 include support for planned state compensation programs, adjustments to fringe benefit rates, increased student organization support, increased hourly wage and state salary compensation, utility costs, student affairs support services, Cultural and Community Center staffing and program support, increased student organization staffing and program support, and operating costs. However, after considering all available resources, no change to the current Student Activities fee of $330 per academic year is recommended for 2021-22.

Health Service Fee

The Health Service Fee supports normal medical and nursing attention and counseling services provided by Schiffert Student Health Services, Cook Counseling Center, and Virginia Tech Rescue Squad operations. An increase of $49 in the Health Service Fee is recommended for 2021-22 to cover planned state compensation programs, adjustments to fringe benefit rates, expanded health clinic hours and staffing needs, Cook Counseling Center operating support, increased hourly wage and salary compensation, utility costs, student affairs support services, and operating costs. The total fee is currently $508 per academic year. For 2021-22, an increase of the Health Service Fee to $557 per academic year is recommended.

Athletic Fee

A portion of the university’s athletic program operations is supported by the Athletic Fee. The student fee revenue covers the costs of athletic administration and sponsoring intercollegiate varsity sports that do not generate revenue. This fee entitles students to free admissions into sporting events, while recognizing that student seating is limited thus not guaranteed. An increase of $36 in the Athletics Fee is recommended for 2021-22 to cover facility and maintenance costs and inflationary pressures on non-revenue sports and activities. The current fee is $326 per academic year. For 2021-22, an increase of the Athletic Fee to $362 per academic year is recommended. § 23.1-1309 of the Code of Virginia limits the percentage share and annual growth of the student fee component as a portion of the overall intercollegiate athletics revenue. The 2021 General Assembly approved temporary relief of this provision due to the revenue impacts of COVID-19; therefore, the university remains in compliance with applicable law.

Transportation Services Fee

Students enrolled at Virginia Tech have unlimited access to bus transportation provided by the Blacksburg Transit System through a contract the university negotiates with the Town of Blacksburg each year. In addition to the convenience for students, the bus system and alternative transportation programs save the university considerable resources by lowering requirements for on-campus parking. An increase of $2 in the Transportation Services Fee is recommended for 2021-22 to cover the need for increased service levels in high density areas, enhanced transit service routes, transit contract increases, planned state compensation programs, adjustments to fringe benefit rates, increased hourly wage and salary compensation, and operating costs. The current fee is $192 per academic year. For 2021-22, an increase of the Transportation Services Fee to $194 per academic year is recommended.
Recreational Sports Fee

The Recreational Sports Fee supports debt retirement, maintenance, operations, intramural and extramural sports club programs, and recreational activities. An increase of $8 in the Recreational Sports Fee is recommended for 2021-22 to cover planned state compensation programs, adjustments to fringe benefit rates, increased hourly wage and salary compensation, utility costs, student affairs support services, and operating costs. The current fee is $327 per academic year. For 2021-22, an increase to the Recreational Sports Fee to $335 per academic year is recommended.

Student Services Fee

The Student Services Fee supports Career Services, non-self-supporting student services components of the Hokie Passport Office including the cost of new student IDs, the Division of Student Affairs, and the campus wireless network. An increase of $4 in the Student Services Fee is recommended for 2021-22 to cover network infrastructure renewal and student services staffing needs. The current fee is $298 per academic year. For 2021-22, an increase to the Student Services Fee to $302 per academic year is recommended.

Student Cultural Activities Fee

The Student Cultural Activities Fee supports the presence and practice of the arts across campus for all students, and provides free or greatly reduced admission to enrolled students. Cost pressures for 2021-22 include support for planned state compensation programs, adjustments to fringe benefit rates, utility costs, and operating costs. However, considering all available resources, a decrease of $9 to the current Student Cultural Activities fee is recommended, resulting in a Student Cultural Activities fee of $164 per academic year for 2021-22.

Summary of Comprehensive Fee

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Annual Fee</td>
<td>Annual Fee</td>
</tr>
<tr>
<td>Student Activity Fee</td>
<td>$330</td>
<td>$330</td>
</tr>
<tr>
<td>Health Service Fee</td>
<td>508</td>
<td>557</td>
</tr>
<tr>
<td>Athletic Fee</td>
<td>326</td>
<td>362</td>
</tr>
<tr>
<td>Transportation Services Fee</td>
<td>192</td>
<td>194</td>
</tr>
<tr>
<td>Recreational Sports Fee</td>
<td>327</td>
<td>335</td>
</tr>
<tr>
<td>Student Services Fee</td>
<td>298</td>
<td>302</td>
</tr>
<tr>
<td>Student Cultural Activities Fee</td>
<td>173</td>
<td>164</td>
</tr>
<tr>
<td>Total</td>
<td>$2,154</td>
<td>$2,244</td>
</tr>
</tbody>
</table>
Comprehensive Fee Reduction for On-line Students

In recognition of students living and studying away from the Blacksburg campus, the university recommends a reduction in the comprehensive fee of $300 per semester for full-time students enrolled in an all virtual schedule (or who have only research hours/ independent study not located on campus). Students must certify that they will reside more than 50 miles from the Blacksburg campus for the entire semester. Part-time and special session enrollment may be eligible for derivative reduction using the same eligibility requirements. Students will maintain access to service provided virtually.

Room and Board Charges

The university’s Residential and Dining Programs serve students by providing on-campus housing and dining services. Generally, all entering freshmen must live on campus, and housing is available on a limited basis for returning students who choose to live on campus. The university establishes optional room and board rates based on a derivation of the Board-approved fee to appropriately reflect costs for Summer Session and summer conferences. All students living on campus must select a meal plan, with the exception of students who elect to reside in the Oak Lane – Phase IV housing development; off-campus students may elect to participate in one of the meal plan programs.

Room Fees

An average 1.9 percent increase to room rates on the Blacksburg campus is proposed to cover planned state compensation programs, adjustments to fringe benefit rates, increased hourly wage and salary compensation, utility costs, student affairs support services, equipment and furniture replacement, increased personnel associated with residential hall operations, and residential facilities. Northern Virginia Gallery proposed rates include local operating alignments. The proposed annual room rates by location and room type are listed below:

<table>
<thead>
<tr>
<th>Room Fees</th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double Occupancy:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Quad (Pre-1983 Dormitories)</td>
<td>5,254</td>
<td>5,356</td>
</tr>
<tr>
<td>Payne Park - Traditional - Double</td>
<td>5,778</td>
<td>5,890</td>
</tr>
<tr>
<td>Main Campbell &amp; Newman - Double Occupancy</td>
<td>5,922</td>
<td>6,036</td>
</tr>
<tr>
<td>Hillcrest - Double Occupancy</td>
<td>6,366</td>
<td>6,490</td>
</tr>
<tr>
<td>O'Shaughnessy - Traditional Double</td>
<td>6,720</td>
<td>6,850</td>
</tr>
<tr>
<td>East &amp; West Ambler Johnston - Traditional/Efficiency Double</td>
<td>6,778</td>
<td>6,910</td>
</tr>
<tr>
<td>Payne Park - Suite - Double</td>
<td>6,964</td>
<td>7,098</td>
</tr>
<tr>
<td>Payne Park - Suite - Double (Large Suite)</td>
<td>7,132</td>
<td>7,270</td>
</tr>
<tr>
<td>Upper Quad (Pearson &amp; New Cadet Hall)</td>
<td>7,188</td>
<td>7,328</td>
</tr>
<tr>
<td>New Residence Hall West - Double Occupancy</td>
<td>7,294</td>
<td>7,436</td>
</tr>
<tr>
<td>Creativity &amp; Innovation District Residence Hall - Double</td>
<td>N/A</td>
<td>7,500</td>
</tr>
<tr>
<td>East &amp; West Ambler Johnston - Private Bath Double</td>
<td>7,712</td>
<td>7,862</td>
</tr>
<tr>
<td>Single Occupancy:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payne Park - Traditional - Single</td>
<td>7,900</td>
<td>8,052</td>
</tr>
<tr>
<td>Main Campbell &amp; Newman - Single Occupancy</td>
<td>8,042</td>
<td>8,198</td>
</tr>
<tr>
<td>Hillcrest - Single Occupancy</td>
<td>8,654</td>
<td>8,822</td>
</tr>
</tbody>
</table>
Payne Park - Suite - Single  
New Residence Hall West - Single Occupancy  
Creativity & Innovation District Residence Hall - Single  
Other:  
Special Purpose Housing  
Graduate Life Center at Donaldson Brown - Double  
Oak Lane IV  
Graduate Life Center at Donaldson Brown - Single  
The Gallery (NOVA) - 4-Person Unit  
The Gallery (NOVA) - 3-Person Unit  
The Gallery (NOVA) - 2-Person Unit

Living Learning Community Fee

The Living Learning Community Fee is an optional charge for students participating in a Living Learning Community in Hoge Hall, East & West Ambler Johnston, Pritchard Hall, Harper Hall, O’Shaughnessy Hall, Peddrew-Yates Hall, Payne Hall, New Residence Hall East, Hillcrest Hall, and Newman Hall and Special Purpose Housing. These residence halls offer unique living and learning opportunities to the student residents who choose to pay the optional annual program fee of $100 to support the cost of operating the program. No increase in the Living Learning Community fee is recommended for 2021-22. Living Learning Community programming will be offered in one additional residence hall in 2021-22: Creativity & Innovation District Residence Hall.

Residential Telecommunications Fee

All students living on campus pay the Residential Telecommunications Fee, which supports residential cable television service, wired network connectivity, and high-performance wireless network coverage. Residential students currently pay $394 annually for telecommunication services. No increase in the Residential Telecommunications Fee is recommended for 2021-22.

Board Fees

Students living on-campus currently have a choice of three types of flexible meal plans. The Flex Plan operates like a debit account with a designated amount for the purchase of food in the dining facilities. Students may deposit cash to their Flex accounts to increase their balance during the year. Consistent with the purchasing power of traditional meal plans, the intent of annual rate changes for the Flex Plans is to hold overall purchasing power constant from year to year.

A 5.6 percent increase is proposed for board fees to cover planned state compensation programs, adjustments to fringe benefit rates, increased food costs, increased hourly wage compensation, utility costs, and facility maintenance and renovation projects. The proposed annual board rates by meal plan program are listed below:

<table>
<thead>
<tr>
<th>Meal Plan Program</th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Flex Plan</td>
<td>$3,908</td>
<td>$4,126</td>
</tr>
<tr>
<td>Mega Flex Plan</td>
<td>4,192</td>
<td>4,426</td>
</tr>
<tr>
<td>Premium Flex Plan</td>
<td>4,484</td>
<td>4,736</td>
</tr>
</tbody>
</table>
Campus Fees

Specialized campus fees are designed to cover costs that are unique to a specific campus. These fees are charges established for a specific campus which are beyond regular tuition and fees and are equal for students, both resident and nonresident.

Northern Virginia Center Student Services Fees

The Comprehensive Fee, which supports a number of on-campus services, is not charged to off-campus students. However, students attending courses at the Northern Virginia Center benefit from several of these services including the infrastructure and use of the wireless network, as well as the issuance and use of student identification cards. The current fee is $148 per academic year. An increase of $3 to $151 for the 2021-22 academic year is recommended to cover network infrastructure renewal.

Roanoke Virginia Tech Carilion School of Medicine Student Services Fees

Students attending courses at the VTCSOM in Roanoke benefit from several of the traditional Comprehensive Fee services including the infrastructure and use of the wireless network and the issuance and use of student identification cards. These students will also have access to health and wellness services, recreational sports, and VTCSOM student government activities.

A $49 increase is recommended for the Student Health Services component to cover counseling and wellness support. A $3 increase is recommended to the Student Services Fee to cover network infrastructure renewal. No change is recommended for the Student Government/Activity Fee. An $8 increase is recommended to the Recreational Sports Fee to support student access to recreational facilities. First, second, and third year medical students, (M1, M2, M3), will be assessed the Recreational Sports Fee. For 2021-22, the following VTCSOM annual student fees are recommended:

<table>
<thead>
<tr>
<th>Fee Description</th>
<th>2020-21 Charge</th>
<th>Proposed Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTCSOM Student Services Fee</td>
<td>$148</td>
<td>$151</td>
</tr>
<tr>
<td>VTCSOM Health Services Fee</td>
<td>472</td>
<td>521</td>
</tr>
<tr>
<td>VTCSOM Student Government/Activity Fee</td>
<td>185</td>
<td>185</td>
</tr>
<tr>
<td>VTCSOM Recreational Sports Fee (FY22 M1, M2, M3)</td>
<td>327</td>
<td>335</td>
</tr>
</tbody>
</table>

Steger Center for International Scholarship Fee Rates

The Steger Center for International Scholarship (the Center) in Riva San Vitale, Switzerland, opened in the Fall of 1993. The Center serves as a resident educational facility for Virginia Tech students from many academic programs. Providing the opportunity for students to study abroad is an important strategy in strengthening the international programs of Virginia Tech, an objective of both the university and the commonwealth.

For purposes of financing the operations of the Center, two separate programs are maintained. First, all instructional costs are accounted for in the Educational and General program of the University Division. Second, the housing, dining, and student activity auxiliary enterprise programs

Presentation Date: March 21, 2021
are recorded within the university’s Residential and Dining Hall System. The Ferrari Foundation, the university’s Swiss subsidiary corporation, manages the day-to-day activities of the Center.

Students attending the Steger Center for International Scholarship are assessed the same tuition as on-campus students, and it is recommended that this tuition policy continue.

For housing and dining services at the Center, the proposed fees are higher than on-campus rates to reflect the higher cost of living at the Center. Students are not required to pay the Blacksburg campus Comprehensive Fee while studying abroad. A student activity fee supports students with community-building social and recreational events and activities. The current Steger Center Room & Board charge is $7,100 per academic year, and the current Steger Center Student Activity Fee is $100 per academic year. No increase is proposed in the Steger Center Student Activity Fee is recommended for the 2021-22 academic year. An increase of $300 to assist with currency exchange valuation is recommended in the Steger Center Room and Board Costs for the 2021-22 academic year.

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steger Center Student Activity Fee</td>
<td>$100</td>
<td>$100</td>
</tr>
<tr>
<td>Steger Center Room &amp; Board Costs</td>
<td>7,100</td>
<td>7,400</td>
</tr>
</tbody>
</table>

**Washington-Alexandria Architecture Center Fee**

To support the cost of operations and ensure the quality of the Washington-Alexandria Architecture Center (WAAC), the college recommended that a supplemental fee be assessed to Virginia Tech and WAAC Consortium students in residence at the center on a per-semester basis. This Educational & General fee helps manage the cost of instructional facilities and equipment and support students in their academic efforts in the robust curricular environment of the WAAC. No change in the per-semester fee is recommended for 2021-22, as shown below:

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time</td>
<td>$300</td>
<td>$300</td>
</tr>
<tr>
<td>Part-time</td>
<td>150</td>
<td>150</td>
</tr>
</tbody>
</table>

**Supplemental Program Fees**

Supplemental Program Fees are designed to cover costs that are unique to a specific discipline. To maintain the intent of the commonwealth’s funding policies regarding the collection and allocation of tuition revenues, Program Fees are charges established for a specific program which are beyond regular tuition and fees and are equal for students, both resident and nonresident.

**Architecture + Design Fee**

Architecture, industrial design, interior design, and landscape architecture students in the School of Architecture + Design need access to appropriate studio equipment, academic programming, and technology. Since Fall 2008, the university has recognized this differential cost of instruction for students with majors in the School of Architecture + Design through a supplemental program fee. This fee supports costs that are unique to Architecture + Design students including: the updating of equipment and materials for instructional studios, student projects, quality
enhancements, and operational support of instructional studios. No change in the supplemental fee is recommended for students admitted prior to Fall 2018. For students admitted in Fall 2018 and later, continuation of the annual fee of $1,500 is recommended, as displayed below. The new rate will be assessed to all Architecture + Design students by Fall 2022.

<table>
<thead>
<tr>
<th>Entered Prior to Fall 2018</th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time</td>
<td>$949.00</td>
<td>$949.00</td>
</tr>
<tr>
<td>Part-time</td>
<td>474.50</td>
<td>474.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Entering Fall 2018 &amp; Later</th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time</td>
<td>1,500.00</td>
<td>1,500.00</td>
</tr>
<tr>
<td>Part-time</td>
<td>750.00</td>
<td>750.00</td>
</tr>
</tbody>
</table>

**Building Construction Fee**

To ensure that the Myers Lawson School of Construction has adequate resources to staff, equip, and enhance the provisions of the Building Construction program, an annual program fee is proposed to recognize the differential cost of instruction for students in the Building Construction major. This fee is important for ensuring the necessary resources to support costs unique to Building Construction students and continued program quality including the continuing need for modernization of equipment and instrumentation for instructional space and student projects, staffing needs of the BUILD lab, required upgrades to lab space, and adequate staff support to ensure the effective maintenance of equipment and technology in the daily operation of the lab. No change in the supplemental fee is recommended for students admitted prior to Fall 2018. For students admitted in Fall 2018 and later, continuation of the annual fee of $1,500 is recommended, as displayed below. The new rate will be assessed to all Building Construction students by Fall 2022.

<table>
<thead>
<tr>
<th>Entered Prior to Fall 2018</th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time</td>
<td>$775.00</td>
<td>$775.00</td>
</tr>
<tr>
<td>Part-time</td>
<td>387.50</td>
<td>387.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Entering Fall 2018 &amp; Later</th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time</td>
<td>1,500.00</td>
<td>1,500.00</td>
</tr>
<tr>
<td>Part-time</td>
<td>750.00</td>
<td>750.00</td>
</tr>
</tbody>
</table>

**Engineering Fee**

To ensure that engineering students continue to receive a state-of-the-art education in a quality learning environment, the university began recognizing the higher cost of instruction in the College of Engineering (COE) through the establishment of a supplemental fee in fall 2007. This fee supports costs that are unique to College of Engineering students including: the continuing need for modernization of instrumentation and materials for instructional laboratories and student projects, instructional space costs, effective maintenance of instrumentation and technology, quality enhancements, and operation of the instructional laboratories. No change in the
supplemental fee is recommended for students admitted prior to Fall 2018. For students admitted in Fall 2018 and later, continuation of the annual fee of $2,000 is recommended, as displayed below. The new rate will be assessed to all College of Engineering students by Fall 2022.

<table>
<thead>
<tr>
<th>Entered Prior to Fall 2018</th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>$775.00</td>
<td>$775.00</td>
</tr>
<tr>
<td>Part-time</td>
<td>387.50</td>
<td>387.50</td>
</tr>
<tr>
<td>Graduate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>1,049.00</td>
<td>1,049.00</td>
</tr>
<tr>
<td>Part-time</td>
<td>524.50</td>
<td>524.50</td>
</tr>
</tbody>
</table>

Entering Fall 2018 & Later

Undergraduate and Graduate

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time</td>
<td>2,000.00</td>
<td>2,000.00</td>
</tr>
<tr>
<td>Part-time</td>
<td>1,000.00</td>
<td>1,000.00</td>
</tr>
</tbody>
</table>

Pamplin College of Business Fee

Delivering a high-quality business education requires the resources to address costs unique to the Pamplin College of Business. To ensure continued excellence in the Pamplin College of Business, a per-credit hour fee was established in 2013-14 to provide dedicated resources to be utilized exclusively for the Pamplin College of Business. The fee was increased to $75 per credit hour beginning in Fall 2018, and the university recommends a continued phasing-in of the $75 per credit hour fee to 4000 level courses in 2021-22.

<table>
<thead>
<tr>
<th>Course Level</th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000, 2000, and 3000 Level Courses</td>
<td>$75.00/hour</td>
<td>$75.00/hour</td>
</tr>
<tr>
<td>4000 Level Courses</td>
<td>$25.00/hour</td>
<td>$75.00/hour</td>
</tr>
</tbody>
</table>

Agriculture Fee

To ensure that the College of Agriculture has adequate resources to deliver cutting-edge, high-quality instruction and maintain critical laboratory facilities and equipment, an annual program fee was established for students in the College of Agriculture. For students admitted in Fall 2018 and later, continuation of the annual fee of $750 is recommended, as displayed below. The new rate will be assessed to all College of Agriculture students by Fall 2022.

<table>
<thead>
<tr>
<th>Entering Fall 2018 &amp; Later</th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate and Graduate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>$750.00</td>
<td>$750.00</td>
</tr>
<tr>
<td>Part-time</td>
<td>375.00</td>
<td>375.00</td>
</tr>
</tbody>
</table>
Course Specific Charges

The university may establish course specific charges for study abroad costs, field trips, course materials, laboratory cost, or other extraordinary costs tied to individual courses. The university avoids establishing course charges for materials and laboratory charges in programs with specialized program fees.

Graduate Degree Program Fees

Specialized graduate degree programs provide a valuable service by meeting targeted educational and professional development needs. Because both the academic units and the university have added costs associated with providing high demand specialized graduate degree programs, specialized graduate program fees address these incremental college and university costs required to deliver high quality programs. To maintain the intent of the commonwealth’s funding policies regarding the collection and allocation of tuition revenues, Specialized Graduate Program Fees are charges established for a specific graduate program, potentially at a specific location, beyond regular tuition and fees and are equal for students, both resident and nonresident.

Veterinary Medicine Facility Fee

Capital improvements have enhanced the College of Veterinary Medicine instructional space. Increased and enhanced facilities were necessary for the recruitment and retention of high-quality faculty and students. All Veterinary Medicine students are assessed a facility fee. Proceeds from the facility fee will be used exclusively for College of Veterinary Medicine instructional space improvements. No change in the fee is recommended for 2021-22, as displayed below.

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veterinary Medicine Facility Fee</td>
<td>$1,200.00</td>
<td>$1,200.00</td>
</tr>
</tbody>
</table>

Master of Public Health (MPH) Fee

The MPH fee provides resources for program-specific course development, faculty and leadership support, and instructional needs. No increase in the fee is recommended for 2021-22, as displayed below.

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time</td>
<td>$525.00</td>
<td>$525.00</td>
</tr>
<tr>
<td>Part-time</td>
<td>262.50</td>
<td>262.50</td>
</tr>
</tbody>
</table>

Master of Business Administration Fee

The Master of Business Administration (MBA) program fee, aligns pricing of the Virginia Tech MBA program and provides funding for the college’s academic program and enhanced career placement services for students. This fee applies to students in the EvMBA and OMBA programs.
yet is not assessed to Executive MBA or Professional MBA students (which have separate rate structures). No increase is recommended for 2021-22, as presented below:

<table>
<thead>
<tr>
<th>MBA (On/Off-Campus)</th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>$175.00/hour</td>
<td>$175.00/hour</td>
<td></td>
</tr>
</tbody>
</table>

**Master of Science in Business Administration (MSBA) Fee**

To ensure the Pamplin College of Business MSBA programs in Business Analytics (BA) and Hospitality & Tourism Management (HTM) are positioned to deliver high-quality instruction and provide experiential learning opportunities and career services to students, the university recognizes the differential cost of the MSBA-BA and MSBA-HTM programs through the assessment of a supplemental E&G program fee. This fee is assessed on a per-credit hour basis for each credit hour taken by the student. No increase is recommended for 2021-22, as presented below:

<table>
<thead>
<tr>
<th>Business Analytics (BA), Hospitality &amp; Tourism Management (HTM)</th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>$175.00/hour</td>
<td>$175.00/hour</td>
<td></td>
</tr>
</tbody>
</table>

**Professional & Executive Model Graduate Degree Program Fees**

While similar to specialized graduate program fees, the industry standard for this type of professional education program is to be quoted in terms of a total cost for the entire program period. Programs generally span from 12 to 24 months. A new multi-year total cost is developed for each incoming cohort. The annual program fees are established as the difference between applicable tuition and fees and the total cost during the cohort period. The program fee for a cohort’s second year is established when tuition and fee rates are established for that year; this can be impacted by various factors including cost assignments by the General Assembly, but are designed to honor the previously quoted total cost of the entire program period. Each Executive Model program and its total cost proposal are summarized below.

**Professional Master of Business Administration (PMBA) Supplemental Fee**

The PMBA program is intended for experienced working professionals to complete an MBA on a part-time basis in an accelerated format. The program is designed on the cohort model with face-to-face weekend classes (in Richmond, Roanoke, and Hampton Roads) while leveraging online technology for supplemental instructional delivery to provide flexibility for busy working professionals to complete the program over a two-year period. The Fall 2020 entering cohort is the last cohort of PMBA students; the Online MBA (OMBA) will enroll new students in its place beginning in summer 2021. The total program cost proposed for resident and Nonresident students in the PMBA program is displayed below:
Fall 2020 Cohort | Two-Year Program Cost | 2020-21 Charge | Proposed 2021-22
---|---|---|---
PMBA Total Cost - Resident | $45,050.00 | $22,525.00 | $22,525.00
(less) Off-Campus Tuition & Fees (*) | (15,342.00) | (15,787.00) |
PMBA Fee - 2020 Resident | $7,183.00 | $6,738.00 |

PMBA Total Cost –Nonresident | $65,707.00 | $32,854.00 | $32,853.00
(less) Off-campus Tuition & Fees (*) | (30,338.00) | (31,200.00) |
PMBA Fee – 2020 Nonresident | $2,516.00 | $1,653.00 |

(*) Ext Graduate tuition rate w/o relief

**Executive Graduate Tuition and Fees**

For new cohorts beginning in 2016-17 in the Ph.D. in Executive Business Research and Executive Master of Natural Resources, the university established an Executive Graduate tuition & fee structure comprised of Executive Graduate Tuition, the Technology Fee, the Library Fee, a Facility & Equipment Fee, and a program-specific supplemental fee. The Spring 2021 cohort of XMNR will be last XMNR cohort using this rate (new XMNR cohorts will use the Professional Graduate Tuition Rate). Executive Graduate Tuition is assessed on a per-credit basis for all credits enrolled. BXBR will continue to use the Executive Graduate tuition & fee structure. Continuing this structure for 2021-22 is recommended. Full-Time semester rates are one-half of the full-time annual rates.

<table>
<thead>
<tr>
<th>2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Graduate Tuition (per-credit)</td>
</tr>
<tr>
<td>Technology Fee (annual)</td>
</tr>
<tr>
<td>Library Fee (annual)</td>
</tr>
<tr>
<td>Facility &amp; Equipment Fee (annual)</td>
</tr>
<tr>
<td>Program-Specific Supplemental Fee</td>
</tr>
</tbody>
</table>

**Executive Master of Natural Resources (XMNR) Supplemental Fee**

In 2010-11, the College of Natural Resources expanded the existing Master of Natural Resources program delivered in the National Capital Region by adding an executive format cohort. The program is an accelerated graduate degree for working professionals with significant management experience. Program adjustments for the Spring 2022 starting cohort reduce the program cost by $5,000 to a total cost of $41,500. Cohorts starting before 2022 utilize the Executive Graduate tuition rate and a cohort-specific program fee to achieve a total cost for the program. Beginning in Spring 2022, cohorts will utilize the Professional Masters tuition rate to achieve the total program cost. Tuition is assessed on all credits taken. Each cohort’s pricing is summarized below.
Spring 2021 Starting Cohort  | Total Program Cost | Spring 2021 | Summer 2021 | Proposed Fall 2021
--- | --- | --- | --- | ---
XMNR Total Cost | $46,500.00 | $15,669.75 | $10,048.25 | $20,782.00
(less) Executive Graduate Tuition & Fees | (15,169.75) | (10,048.25) | (15,674.75) |
XMNR Fee – 2021 Cohort | 500.00 | 0.00 | 5,107.25 |

Spring 2022 Starting Cohort  | Total Program Cost | Proposed 2022 | Summer 2022 | Fall 2022
--- | --- | --- | --- | ---
XMNR Total Cost | $41,500.00 | $15,139.75 | $8,143.75 | $18,216.50
(less) Professional Graduate Tuition & Fees | (12,992.00) | (6,496.00) | TBD |
XMNR Fee – 2022 Cohort | 2,147.75 | 1,647.75 | TBD |

**PhD in Executive Business Research (BXBR) Supplemental Fee**

The Pamplin College of Business launched a new Ph.D. in Business with a concentration in Executive Business Research that started in Fall 2016. The three-year program is administered through the College’s Falls Church facility in the National Capital Region and provides business professionals with rigorous training in analytical and research techniques, exposure to the scholarly literature in business, and dissertation research experience that is translational in nature. The degree is marketed as a total cost program, spreading the advertised total cost over three academic years. Each new cohort will be established with Executive Graduate tuition & fees and a per-credit hour BXBR program to achieve the proposed total cost summarized below. This program fee will be assessed on a per credit hour basis in order to provide flexibility in a student’s plan of study. Students taking more than the scheduled three years will continue to pay the Executive Tuition and fee rates and the BXBR supplemental fee established for their cohort.

---

**2021-22**

Fall 2016 Cohort
BXBR Program Fee - Per Credit  
$365.00

Fall 2017 Cohort
BXBR Program Fee – Per Credit  
$323.50

Fall 2018 Cohort
BXBR Program Fee – Per Credit  
$323.50

Fall 2019 Cohort
Total Program Cost  
$135,000.00

(less) Executive Graduate T&F  
(33,606.75)

Fall 2019 Cohort
Total Program Cost  
$135,000.00

(less) Executive Graduate T&F  
(33,606.75)

21

*Presentation Date: March 21, 2021*
BXBR Program Fee Estimated Total 11,393.25 11,143.00 10,410.25
BXBR Program Fee - Per Credit 573.50 567.75 520.50

<table>
<thead>
<tr>
<th>Fall 2020 Cohort</th>
<th>Total Program Cost</th>
<th>2020-21</th>
<th>2021-22</th>
<th>2022-23</th>
</tr>
</thead>
<tbody>
<tr>
<td>BXBR Total Program Cost</td>
<td>$135,000.00</td>
<td>0</td>
<td>$45,000.00</td>
<td>$45,000.00</td>
</tr>
<tr>
<td>(less) Executive Graduate T&amp;F</td>
<td>(33,634.50)</td>
<td>(34,814.00)</td>
<td>(TBD)</td>
<td></td>
</tr>
<tr>
<td>BXBR Program Fee Estimated Total</td>
<td>11,365.50</td>
<td>10,186.00</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>BXBR Program Fee - Per Credit</td>
<td>573.50</td>
<td>509.25</td>
<td>TBD</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fall 2021 Cohort</th>
<th>Total Program Cost</th>
<th>2021-22</th>
<th>2022-23</th>
<th>2023-24</th>
</tr>
</thead>
<tbody>
<tr>
<td>BXBR Total Program Cost</td>
<td>$135,000.00</td>
<td>0</td>
<td>$45,000.00</td>
<td>$45,000.00</td>
</tr>
<tr>
<td>(less) Executive Graduate T&amp;F</td>
<td>(34,589.75)</td>
<td>(TBD)</td>
<td>(TBD)</td>
<td></td>
</tr>
<tr>
<td>BXBR Program Fee Estimated Total</td>
<td>10,410.25</td>
<td>TBD</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>BXBR Program Fee - Per Credit</td>
<td>520.50</td>
<td>TBD</td>
<td>TBD</td>
<td></td>
</tr>
</tbody>
</table>

**Executive Master of Business Administration (EMBA)**

The EMBA program is tailored for business leaders to complete an MBA in an accelerated format. The program is designed on the cohort model with face-to-face classes every other weekend (in Arlington) to provide flexibility for busy working professionals to complete the program over a 18-month period. The program’s total cost is the same for resident and nonresident students. Tuition for this program does not utilize the aforementioned tuition and fee rates, but rather assesses the total program cost in six installments to accommodate corporate sponsorship of employee tuition. For 2021-22, a total cost of $95,000 is recommended.

<table>
<thead>
<tr>
<th>2020-21</th>
<th>Proposed Charge 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive MBA (EMBA)</td>
<td>$95,000</td>
</tr>
</tbody>
</table>

**Graduate Tuition Pricing Basis**

As the university continues to develop and offer targeted educational opportunities to meet student and market demand, the university may elect to utilize per-credit hour tuition pricing in lieu of the traditional full/part-time pricing approach in situations where such pricing better aligns with the program delivery model. A leading example is accelerated master degrees where credit hours delivered significantly exceeds the level planned through traditional full-time programs.
Parking Fee

The General Assembly directed institutions of higher education to organize parking services as an auxiliary enterprise operation in 1989. The expenditure of General Fund dollars for the maintenance or improvement of parking lots and facilities was prohibited. Accordingly, Virginia Tech established the Parking Services Auxiliary Enterprise at the beginning of fiscal year 1989-90 and instituted a fee for faculty, staff, and students who parked in campus lots.

An average increase of 4.2 percent in the parking rate is recommended for the 2021-22 academic year. This increase is needed to cover planned state compensation programs, adjustments to fringe benefit rates, utility costs, and operating costs. The university also proposes to continue to provide a parking rate discount to encourage car-pooling and remote lot parking in an effort to reduce the amount of vehicular traffic on campus. Annual student parking fees at other Virginia doctoral institutions for 2020-21 range from $272 to $826 for students, dependent upon the type and proximity of parking facilities.

<table>
<thead>
<tr>
<th>Parking Permit Type</th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
<th>$ Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty/Staff</td>
<td>$360</td>
<td>$375</td>
<td>$15</td>
<td>4.2%</td>
</tr>
<tr>
<td>Commuter/Graduate Student</td>
<td>$315</td>
<td>$330</td>
<td>15</td>
<td>4.8%</td>
</tr>
<tr>
<td>Commuter/Graduate Premium</td>
<td>$415</td>
<td>$430</td>
<td>15</td>
<td>3.6%</td>
</tr>
<tr>
<td>Residential Student</td>
<td>$450</td>
<td>$470</td>
<td>20</td>
<td>4.4%</td>
</tr>
</tbody>
</table>

History of Tuition Legislation in Virginia

The period of 1989 to the present has been one of significant change in the level of state support, tuition policies, and rates. The substantial growth in tuition continues to be a source of increasing concern to institutions of higher education, students, parents, and state officials.

During the period of 1989 to 1996, tuition increased dramatically across the commonwealth due to the decline in General Fund support for higher education. At Virginia Tech, undergraduate tuition increased by 49 percent for resident students and 91 percent for nonresident students in the six-year period 1989-90 to 1995-96, a direct result of six rounds of reductions in state General Fund support.

In 1994 the Appropriation Act included language which established tuition rate growth caps of 3 percent for resident students and 7.5 percent for nonresident students for each year of the biennium. For 1996-97 through 1998-99, the Appropriation Act included language to freeze tuition for Virginia undergraduates at the 1995-96 level. The 1999 General Assembly approved a 20 percent reduction in tuition and mandatory Educational and General fees for Virginia undergraduate students and offset the reduction in revenue by providing new General Fund support. The 2000 Appropriation Act included language to continue tuition and mandatory Educational and General fees at 1999-00 levels for Virginia undergraduate students during the 2000-02 biennium.

To address state revenue shortfalls, language in the 2002 Appropriation Act provided authority to increase tuition and mandatory Educational and General fees for Virginia undergraduate students by 9 percent. The 2003 General Assembly allowed for the annualization of the Spring 2003 tuition increases and limited increases in tuition and mandatory Educational and General fees for Fall 2003 for Virginia undergraduate students to 5 percent plus nongeneral fund cost assignments.
The authority granted by the 2004 General Assembly continues, and establishes that “The Board of Visitors . . . of institutions of higher education may set tuition and fee charges at levels they deem to be appropriate for all resident student groups based on, but not limited to, competitive market rates, provided that the total revenue generated by the collection of tuition and fees from all students is within the nongeneral fund appropriation for educational and general programs provided in the act.”

Effective July 1, 2006, the university entered into a management agreement with the Commonwealth of Virginia. A critical element of this agreement is the reaffirmation of the Board of Visitors’ authority to establish tuition and fee rates. This rate setting authority, coupled with the sum sufficient revenue authority to establish nongeneral fund appropriations as provided in the management agreement, provides a much more stable environment for planning and establishment of future tuition and fee rates.

For 2007-08, the 2007 General Assembly established a Tuition Incentive for allocation to institutions contingent upon limiting the increase of tuition and E&G fees for in-state undergraduate students to 6 percent plus in-state undergraduate financial aid. The 2008 General Assembly continued the incentive fund concept to encourage institutions to limit the in-state undergraduate tuition and E&G fee increases to 3 percent for E&G operations and 1 percent for student financial aid in 2008-09.

Language included in the 2009 budget, and continued in 2010, reiterated the intent of the federal American Recovery and Reinvestment Act of 2009 (ARRA) to “mitigate the need to raise tuition on in-state students at public colleges and universities.” As a result of this Act, the University division received over $11 million in funding in 2009-10. This funding came along with an understanding, expressed verbally by state budget-writers, that higher education institutions would use ARRA funding to mitigate the need to increase tuition to Virginia residents beyond 5 percent.

The Governor’s Commission on Higher Education, Reform, Innovation, and Investment introduced the Higher Education Opportunity Act of 2011 at the start of the 2011 General Assembly. In this legislation, institutional tuition and fee-setting authority is retained by the Board of Visitors. However, total tuition and fee revenue is limited to the aggregate cost of education for all enrolled students, minus state General Fund support. The model does allow for exclusion of Virginia resident tuition and fee revenue directed towards financial aid, an institution’s nongeneral fund share of the state mandated salary and fringe increases, improving faculty salary competitiveness, and unavoidable cost increases to ensure flexibility and inclusion of specific institutional characteristics, missions, and goals. The university is in compliance with this test; thus, the Board of Visitors retains the authority to set tuition and fee levels.

For 2019-20, the 2019 General Assembly approved a pool of funds to support “In-State Undergraduate Affordability”. Allocations of this pool are to be granted to public institutions in Virginia that maintain tuition and mandatory Educational & General (E&G) fees for in-state undergraduate students to the same levels as in 2018-19. Accepting the funding and holding in-state undergraduate tuition and E&G fees level was optional. Virginia Tech and all four-year public universities in the commonwealth accepted the funding and held in-state undergraduate tuition level for the 2019-20 academic year.
Mitigation of Tuition Dependency

Tuition increases are one component of the university’s overall resource and budget development strategy. To mitigate dependency on tuition the university continuously explores opportunities to maintain and grow enrollment in strategic market-informed disciplines and locations, invests in quality enhancements to ensure the value of a Virginia Tech degree, and seeks to diversify revenue by leveraging non-tuition sources including philanthropy and entrepreneurial activities. Tuition provides a significant portion of the university’s E&G revenue, and the price elasticity of demand is an ever-present consideration in the development process.

Summary of Tuition and Fee Rates

A summary of the recommended tuition rates is shown on Schedules 1 and 2, and a summary of fees is attached on Schedules 3 and 4. Finally, the total of all mandatory costs for students to attend Virginia Tech is detailed on Schedule 5 for undergraduate students, Schedule 6 for graduate students, and Schedule 7 for professional degree students.

RECOMMENDATION:
That the proposed tuition and fee rates be approved, effective Fall Semester 2021.

March 22, 2021
### RECOMMENDATION

<table>
<thead>
<tr>
<th></th>
<th>Proposed 2020-21 Charge</th>
<th>2021-22 Base</th>
<th>Rate Increase</th>
<th>28% One-time Relief</th>
<th>Net Increase</th>
<th>Proposed 2021-22 Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Undergraduate Students</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>$11,420</td>
<td>$11,751</td>
<td>$331</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td>Nonresident</td>
<td>29,960</td>
<td>30,829</td>
<td>869</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td><strong>Graduate Students</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-Campus Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>13,701</td>
<td>14,098</td>
<td>397</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td>Nonresident</td>
<td>27,614</td>
<td>28,415</td>
<td>801</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td>Off-Campus Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>15,167</td>
<td>15,607</td>
<td>440</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td>Nonresident</td>
<td>29,559</td>
<td>30,416</td>
<td>857</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td><strong>Veterinary Medicine</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Virginia/Maryland</td>
<td>21,906</td>
<td>22,462</td>
<td>556</td>
<td>2.5%</td>
<td>(0.7%)</td>
<td>1.8%</td>
</tr>
<tr>
<td>Nonresident</td>
<td>50,435</td>
<td>51,459</td>
<td>1,024</td>
<td>2.0%</td>
<td>(0.6%)</td>
<td>1.5%</td>
</tr>
<tr>
<td><strong>VTC School of Medicine</strong></td>
<td>53,113</td>
<td>54,653</td>
<td>1,540</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
</tbody>
</table>
## 2021-22 Special Tuition Rates

### Summary of Hourly Rates

<table>
<thead>
<tr>
<th>Regular Part-Time Students (a)</th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
<th>Increase</th>
<th>28%</th>
<th>One-time Relief</th>
<th>Net Increase</th>
<th>Proposed 2021-22 Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Undergraduate Students</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>$475.75</td>
<td>$489.75</td>
<td>$14.00</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>$485.75</td>
</tr>
<tr>
<td>Nonresident</td>
<td>1,248.25</td>
<td>1,284.50</td>
<td>36.25</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>1,274.25</td>
</tr>
<tr>
<td><strong>Graduate Students</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-Campus Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>761.25</td>
<td>783.25</td>
<td>22.00</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>777.00</td>
</tr>
<tr>
<td>Nonresident</td>
<td>1,534.00</td>
<td>1,578.50</td>
<td>44.50</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>1,566.00</td>
</tr>
<tr>
<td>Off-Campus Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>842.50</td>
<td>867.00</td>
<td>24.50</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>860.00</td>
</tr>
<tr>
<td>Nonresident</td>
<td>1,642.25</td>
<td>1,689.75</td>
<td>47.50</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>1,676.25</td>
</tr>
<tr>
<td><strong>Summer and Winter Sessions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-Campus Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate Resident</td>
<td>428.25</td>
<td>440.75</td>
<td>12.50</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>437.25</td>
</tr>
<tr>
<td>Undergraduate Nonresident</td>
<td>1,123.00</td>
<td>1,156.00</td>
<td>33.00</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>1,146.75</td>
</tr>
<tr>
<td><strong>Online Graduate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tier 1</td>
<td>-</td>
<td>1,075.00</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Tier 2</td>
<td>975.00</td>
<td>1,000.00</td>
<td>25.00</td>
<td>2.6%</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Tier 3</td>
<td>900.00</td>
<td>925.00</td>
<td>25.00</td>
<td>2.8%</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Tier 4</td>
<td>825.00</td>
<td>850.00</td>
<td>25.00</td>
<td>3.0%</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Professional/Executive Graduate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Graduate Tuition Rate (EvMBA, DAAS, MSBA-HTM, XMNR)</td>
<td>1,025.00</td>
<td>1,050.00</td>
<td>25.00</td>
<td>2.4%</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Executive Graduate Tuition Rate (BXBR)</td>
<td>1,642.25</td>
<td>1,689.75</td>
<td>47.50</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>1,676.25</td>
</tr>
<tr>
<td><strong>School Personnel</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate Resident</td>
<td>357.00</td>
<td>367.25</td>
<td>10.25</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>364.25</td>
</tr>
<tr>
<td>Graduate Resident</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blacksburg Campus</td>
<td>571.00</td>
<td>587.50</td>
<td>16.50</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>582.75</td>
</tr>
<tr>
<td>Extended Campus</td>
<td>632.00</td>
<td>650.25</td>
<td>18.25</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>645.00</td>
</tr>
<tr>
<td><strong>Study Abroad Programs</strong> (c)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate Resident</td>
<td>381.00</td>
<td>391.75</td>
<td>10.75</td>
<td>2.8%</td>
<td>(0.8%)</td>
<td>2.0%</td>
<td>388.75</td>
</tr>
<tr>
<td>Undergraduate Nonresident</td>
<td>999.00</td>
<td>1,027.50</td>
<td>28.50</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.0%</td>
<td>1,019.50</td>
</tr>
<tr>
<td>Graduate Resident</td>
<td>609.00</td>
<td>626.50</td>
<td>17.50</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>621.50</td>
</tr>
<tr>
<td>Graduate Nonresident</td>
<td>1,227.00</td>
<td>1,262.75</td>
<td>35.75</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>1,252.75</td>
</tr>
<tr>
<td><strong>Graduate Candidacy Status</strong> (d)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Resident Blacksburg</td>
<td>-</td>
<td>705.00</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Graduate Nonresident Blacksburg</td>
<td>-</td>
<td>1,420.75</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Graduate Resident Extended Campus</td>
<td>-</td>
<td>780.25</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Graduate Nonresident Extended Campus</td>
<td>-</td>
<td>1,520.75</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

(a) Part-time tuition charges for all student categories are derived from the full-time rate and are directly related to the number of credit hours taken. For tuition calculation purposes, the full-time undergraduate semester rate is divided by 12 credit hours and the full-time graduate student semester rate is divided by 9 hours.

(b) Rate effective beginning Summer semester 2021.

(c) Tuition rates for study abroad do not include students studying at the Steger Center for International Scholarship.

(d) Graduate Candidacy Status is a reduced tuition rate for doctoral students taking research and dissertation hours after completing two years of course work and passing their preliminary exam.

Presentation Date: March 21, 2021
## Schedule 3

**VIRGINIA TECH**  
**2021-22 FEE RECOMMENDATIONS**  
**SUMMARY OF ANNUAL CHARGES**

<table>
<thead>
<tr>
<th>Educational and General Fee</th>
<th>2020-21 Charge</th>
<th>2021-22 Base</th>
<th>Increase $</th>
<th>Increase %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology Service Fee</td>
<td>$76</td>
<td>$78</td>
<td>$2</td>
<td>2.6%</td>
</tr>
<tr>
<td>Library Fee</td>
<td>99</td>
<td>102</td>
<td>3</td>
<td>3.0%</td>
</tr>
<tr>
<td>Commonwealth Facility &amp; Equipment Fee (Nonresident Students)</td>
<td>604</td>
<td>604</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Immigration Services Fee (International Students)</td>
<td>550</td>
<td>550</td>
<td>0</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comprehensive Fee</th>
<th>2020-21</th>
<th>2021-22</th>
<th>Increase $</th>
<th>Increase %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Activity Fee</td>
<td>330</td>
<td>330</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Health Service Fee</td>
<td>508</td>
<td>557</td>
<td>49</td>
<td>9.6%</td>
</tr>
<tr>
<td>Athletic Fee</td>
<td>326</td>
<td>362</td>
<td>36</td>
<td>11.0%</td>
</tr>
<tr>
<td>Transportation Services Fee</td>
<td>192</td>
<td>194</td>
<td>2</td>
<td>1.0%</td>
</tr>
<tr>
<td>Recreational Sports Fee</td>
<td>327</td>
<td>335</td>
<td>8</td>
<td>2.4%</td>
</tr>
<tr>
<td>Student Services Fee</td>
<td>298</td>
<td>302</td>
<td>4</td>
<td>1.3%</td>
</tr>
<tr>
<td>Student Cultural Activities Fee</td>
<td>173</td>
<td>164</td>
<td>(9)</td>
<td>(5.2%)</td>
</tr>
<tr>
<td>Total Comprehensive Fee</td>
<td>2,154</td>
<td>2,244</td>
<td>90</td>
<td>4.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Campus Fees</th>
<th>2020-21</th>
<th>2021-22</th>
<th>Increase $</th>
<th>Increase %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Virginia Center Student Services</td>
<td>148</td>
<td>151</td>
<td>3</td>
<td>2.0%</td>
</tr>
<tr>
<td>Roanoke VTCSOM Student Services Fee</td>
<td>148</td>
<td>151</td>
<td>3</td>
<td>2.0%</td>
</tr>
<tr>
<td>Roanoke VTCSOM Health Services Fee</td>
<td>472</td>
<td>521</td>
<td>49</td>
<td>10.4%</td>
</tr>
<tr>
<td>Roanoke VTCSOM Student Govt/Student Activity Fee</td>
<td>185</td>
<td>185</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Roanoke VTCSOM Recreational Sports Fee (M1, M2, and M3)</td>
<td>327</td>
<td>335</td>
<td>8</td>
<td>2.4%</td>
</tr>
<tr>
<td>Steger Center Student Activity Fee</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Steger Center (Room &amp; Board)</td>
<td>7,100</td>
<td>7,400</td>
<td>300</td>
<td>4.2%</td>
</tr>
<tr>
<td>Washington-Alexandria Architecture Center Fee</td>
<td>300</td>
<td>300</td>
<td>0</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Room Fees</th>
<th>2020-21</th>
<th>2021-22</th>
<th>Increase $</th>
<th>Increase %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double Occupancy:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Quad (Pre-1983 Dormitories)</td>
<td>5,254</td>
<td>5,356</td>
<td>102</td>
<td>1.9%</td>
</tr>
<tr>
<td>Payne Park - Traditional - Double</td>
<td>5,778</td>
<td>5,890</td>
<td>112</td>
<td>1.9%</td>
</tr>
<tr>
<td>Main Campbell &amp; Newman - Double Occupancy</td>
<td>5,922</td>
<td>6,036</td>
<td>114</td>
<td>1.9%</td>
</tr>
<tr>
<td>Hillcrest - Double Occupancy</td>
<td>6,366</td>
<td>6,490</td>
<td>124</td>
<td>1.9%</td>
</tr>
<tr>
<td>O’Shaughnessy - Traditional Double</td>
<td>6,720</td>
<td>6,850</td>
<td>130</td>
<td>1.9%</td>
</tr>
<tr>
<td>East &amp; West Ambler Johnston - Traditional/Efficiency Double</td>
<td>6,778</td>
<td>6,910</td>
<td>132</td>
<td>1.9%</td>
</tr>
<tr>
<td>Payne Park - Suite - Double</td>
<td>6,964</td>
<td>7,098</td>
<td>134</td>
<td>1.9%</td>
</tr>
<tr>
<td>Payne Park - Suite - Double (Large Suite)</td>
<td>7,132</td>
<td>7,270</td>
<td>138</td>
<td>1.9%</td>
</tr>
<tr>
<td>Upper Quad (Pearson &amp; New Cadet Hall)</td>
<td>7,188</td>
<td>7,328</td>
<td>140</td>
<td>1.9%</td>
</tr>
<tr>
<td>New Residence Hall West - Double Occupancy</td>
<td>7,294</td>
<td>7,436</td>
<td>142</td>
<td>1.9%</td>
</tr>
<tr>
<td>Creativity &amp; Innovation District Residence Hall - Double</td>
<td>N/A</td>
<td>7,500</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>East &amp; West Ambler Johnston - Private Bath Double</td>
<td>7,712</td>
<td>7,862</td>
<td>150</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

| Single Occupancy: | | | | |
| Payne Park - Traditional - Single | 7,900 | 8,052 | 152 | 1.9% |
| Main Campbell & Newman - Single Occupancy | 8,042 | 8,198 | 156 | 1.9% |
| Hillcrest - Single Occupancy | 8,654 | 8,822 | 168 | 1.9% |
| Payne Park - Suite - Single | 9,606 | 9,792 | 186 | 1.9% |
| New Residence Hall West - Single Occupancy | 9,938 | 10,130 | 192 | 1.9% |
| Creativity & Innovation District Residence Hall - Single | N/A | 10,200 | N/A | N/A |

| Other: | | | | |
| Special Purpose Housing | 6,556 | 6,682 | 126 | 1.9% |
| Graduate Life Center at Donaldson Brown - Double | 7,294 | 7,436 | 142 | 1.9% |
| Oak Lane IV | 7,826 | 7,978 | 152 | 1.9% |
| Graduate Life Center at Donaldson Brown - Single | 9,938 | 10,130 | 192 | 1.9% |
| The Gallery (NOVA) - 4-Person Unit | 7,150 | 7,600 | 450 | 6.3% |
| The Gallery (NOVA) - 3-Person Unit | 7,900 | 8,200 | 300 | 3.8% |
| The Gallery (NOVA) - 2-Person Unit | 8,400 | 8,500 | 100 | 1.2% |

| Living Learning Community Fee | 100 | 100 | 0 | 0.0% |

| Residential Telecommunications Fee | 394 | 394 | 0 | 0.0% |

| Board Fees | | | | |
| Major Flex Plan | 3,908 | 4,126 | 218 | 5.6% |
| Mega Flex Plan | 4,192 | 4,426 | 234 | 5.6% |
| Premium Flex Plan | 4,484 | 4,736 | 252 | 5.6% |

| Parking Fees | Faculty/Staff | 360 | 375 | 15 | 4.2% |
| Commuter/Graduate Student | 315 | 330 | 15 | 4.8% |
| Commuter/Graduate Premium | 415 | 430 | 15 | 3.6% |
| Residential Student | 450 | 470 | 20 | 4.4% |

Presentation Date: March 21, 2021
## VIRGINIA TECH
### 2021-22 SUPPLEMENTAL PROGRAM FEES

All charges are academic year unless otherwise noted. 2020-21 2021-22 Increase

<table>
<thead>
<tr>
<th>Program Fees</th>
<th>2020-21 Charge</th>
<th>2021-22 Base</th>
<th>Increase $</th>
<th>Increase %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture + Design Supplemental Fee</td>
<td>$ 949.00</td>
<td>$ 949.00</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Undergraduate &amp; Graduate Enrolled Prior To Fall 2018</td>
<td>Full-time</td>
<td>$ 474.50</td>
<td>$ 474.50</td>
<td>0 0.0%</td>
</tr>
<tr>
<td>Undergraduate &amp; Graduate Entering Fall 2018 &amp; Later</td>
<td>Full-time</td>
<td>$ 1,500.00</td>
<td>$ 1,500.00</td>
<td>0 0.0%</td>
</tr>
<tr>
<td>Building Construction Supplemental Fee</td>
<td>$ 775.00</td>
<td>$ 775.00</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Undergraduate Enrolled Prior To Fall 2018</td>
<td>Full-time</td>
<td>$ 387.50</td>
<td>$ 387.50</td>
<td>0 0.0%</td>
</tr>
<tr>
<td>Undergraduate Entering Fall 2018 &amp; Later</td>
<td>Full-time</td>
<td>$ 1,000.00</td>
<td>$ 1,000.00</td>
<td>0 0.0%</td>
</tr>
<tr>
<td>Engineering Supplemental Fee</td>
<td>$ 775.00</td>
<td>$ 775.00</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Undergraduate Enrolled Prior To Fall 2018</td>
<td>Full-time</td>
<td>$ 524.50</td>
<td>$ 524.50</td>
<td>0 0.0%</td>
</tr>
<tr>
<td>Undergraduate Entering Fall 2018 &amp; Later</td>
<td>Full-time</td>
<td>$ 2,000.00</td>
<td>$ 2,000.00</td>
<td>0 0.0%</td>
</tr>
<tr>
<td>Pamplin College of Business Supplemental Fee</td>
<td>Per Credit Hour</td>
<td>$ 75.00</td>
<td>$ 75.00</td>
<td>0 0.0%</td>
</tr>
<tr>
<td>Agriculture &amp; Life Sciences Supplemental Fee</td>
<td>Per Credit Hour</td>
<td>$ 25.00</td>
<td>$ 75.00</td>
<td>50 200.0%</td>
</tr>
<tr>
<td>Undergraduate and Graduate Entering Fall 2018 and Later</td>
<td>Full-time</td>
<td>$ 750.00</td>
<td>$ 750.00</td>
<td>0 0.0%</td>
</tr>
<tr>
<td>Specialized Graduate Degree Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Veterinary Medicine Facility Fee</td>
<td>$ 1,200.00</td>
<td>$ 1,200.00</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Master of Public Health</td>
<td>$ 525.00</td>
<td>$ 525.00</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Master of Business Administration (EvMBA, OMBA)</td>
<td>Per Credit Hour</td>
<td>$ 175.00</td>
<td>$ 175.00</td>
<td>0 0.0%</td>
</tr>
<tr>
<td>Master of Science in Business Administration (MSBA)</td>
<td>Per Credit Hour</td>
<td>$ 175.00</td>
<td>$ 175.00</td>
<td>0 0.0%</td>
</tr>
<tr>
<td>Concentrations in Business Analytics (BA) and Hospitality &amp; Tourism Management (HTM)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Executive Model Graduate Degree Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Master of Business Administration (PMBA)</td>
<td>Fall 2020 Cohort</td>
<td>Full-time 7,183.00</td>
<td>6,738.00 (a)</td>
<td></td>
</tr>
<tr>
<td>Executive Master of Natural Resources (XMNR)</td>
<td>Spring 2021 Cohort</td>
<td>Per Credit Hour 300.00</td>
<td>280.75</td>
<td></td>
</tr>
<tr>
<td>Executive PhD in Business Concentration in Business Research (ExPHD)</td>
<td>Fall 2016 Cohort</td>
<td>Per Credit Hour 365.00</td>
<td>365.00 (a)</td>
<td></td>
</tr>
<tr>
<td>Executive Master of Business Administration (EMBA)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(a) Executive Model Graduate Degree Program fees are designed to allocate a total cost over multiple years of the program, and utilize a fee to balance the difference between the quoted price and traditional tuition and fees. Changes from year to year do not necessarily reflect a change in total program cost.

(b) Proposing Spring 2022 XMNR Cohort total price lowering $5,000 to $41,500 and using Professional Graduate tuition rate instead of Executive Graduate tuition rate.
## VIRGINIA TECH
### TOTAL COST TO STUDENTS
#### Comparison of 2020-21 and 2021-22 Annual Charges

### UNDERGRADUATE STUDENTS

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
<th>Increase</th>
<th>$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resident</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition</td>
<td>$11,420</td>
<td>$11,751</td>
<td>$331</td>
<td>2.9%</td>
<td></td>
</tr>
<tr>
<td>(less) One-Time Relief</td>
<td>-</td>
<td>(93)</td>
<td>(93)</td>
<td>(0.8%)</td>
<td></td>
</tr>
<tr>
<td>Educational and General Fee</td>
<td>175</td>
<td>180</td>
<td>5</td>
<td>2.9%</td>
<td></td>
</tr>
<tr>
<td>Subtotal Tuition and E &amp; G Fee</td>
<td>11,595</td>
<td>11,838</td>
<td>243</td>
<td>2.1%</td>
<td></td>
</tr>
<tr>
<td>Comprehensive Fee</td>
<td>2,154</td>
<td>2,244</td>
<td>90</td>
<td>4.2%</td>
<td></td>
</tr>
<tr>
<td><strong>Total All Residents</strong></td>
<td>13,749</td>
<td>14,082</td>
<td>333</td>
<td>2.4%</td>
<td></td>
</tr>
<tr>
<td>Room (Lower Quad Dorms &amp; Telecommunications Fee)(^{(a)})</td>
<td>5,648</td>
<td>5,750</td>
<td>102</td>
<td>1.8%</td>
<td></td>
</tr>
<tr>
<td>Board (Major Flex Plan)(^{(a)})</td>
<td>3,908</td>
<td>4,126</td>
<td>218</td>
<td>5.6%</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal Room and Board</strong></td>
<td>9,556</td>
<td>9,876</td>
<td>320</td>
<td>3.3%</td>
<td></td>
</tr>
<tr>
<td><strong>Total Cost for Residents Living on Campus</strong></td>
<td>23,305</td>
<td>23,958</td>
<td>653</td>
<td>2.8%</td>
<td></td>
</tr>
</tbody>
</table>

### Nonresident

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
<th>Increase</th>
<th>$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition</td>
<td>29,960</td>
<td>30,829</td>
<td>869</td>
<td>2.9%</td>
<td></td>
</tr>
<tr>
<td>(less) One-Time Relief</td>
<td>-</td>
<td>(245)</td>
<td>(245)</td>
<td>(0.8%)</td>
<td></td>
</tr>
<tr>
<td>Educational and General Fee</td>
<td>779</td>
<td>784</td>
<td>5</td>
<td>0.6%</td>
<td></td>
</tr>
<tr>
<td>Subtotal Tuition and E &amp; G Fee</td>
<td>30,739</td>
<td>31,368</td>
<td>629</td>
<td>2.0%</td>
<td></td>
</tr>
<tr>
<td>Comprehensive Fee</td>
<td>2,154</td>
<td>2,244</td>
<td>90</td>
<td>4.2%</td>
<td></td>
</tr>
<tr>
<td><strong>Total All Nonresidents</strong></td>
<td>32,893</td>
<td>33,612</td>
<td>719</td>
<td>2.2%</td>
<td></td>
</tr>
<tr>
<td>Room (Lower Quad Dorms &amp; Telecommunications Fee)(^{(a)})</td>
<td>5,648</td>
<td>5,750</td>
<td>102</td>
<td>1.8%</td>
<td></td>
</tr>
<tr>
<td>Board (Major Flex Plan)(^{(a)})</td>
<td>3,908</td>
<td>4,126</td>
<td>218</td>
<td>5.6%</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal Room and Board</strong></td>
<td>9,556</td>
<td>9,876</td>
<td>320</td>
<td>3.3%</td>
<td></td>
</tr>
<tr>
<td><strong>Total Cost for Nonresidents Living on Campus</strong></td>
<td>42,449</td>
<td>43,488</td>
<td>1,039</td>
<td>2.4%</td>
<td></td>
</tr>
</tbody>
</table>

\(^{(a)}\) The majority of freshmen are housed in Lower Quad dorms and choose the Major Flex Plan.

Presentation Date: March 21, 2021
## GRADUATE STUDENTS

### On-Campus Programs

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>2021-22</th>
<th>Increase</th>
<th>Charge Base</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resident</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition</td>
<td>$13,701</td>
<td>$14,098</td>
<td>$397</td>
<td>2.9%</td>
<td></td>
</tr>
<tr>
<td>(less) One-Time Relief</td>
<td>-</td>
<td>(112)</td>
<td>(112)</td>
<td>(0.8%)</td>
<td></td>
</tr>
<tr>
<td>Educational and General Fee</td>
<td>175</td>
<td>180</td>
<td>5</td>
<td>2.9%</td>
<td></td>
</tr>
<tr>
<td>Subtotal Tuition and E &amp; G Fee</td>
<td>13,876</td>
<td>14,166</td>
<td>290</td>
<td>2.1%</td>
<td></td>
</tr>
<tr>
<td>Comprehensive Fee</td>
<td>2,154</td>
<td>2,244</td>
<td>90</td>
<td>4.2%</td>
<td></td>
</tr>
<tr>
<td><strong>Total Cost for Residents</strong></td>
<td><strong>16,030</strong></td>
<td><strong>16,410</strong></td>
<td><strong>380</strong></td>
<td><strong>2.4%</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>2021-22</th>
<th>Increase</th>
<th>Charge Base</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nonresident</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition</td>
<td>27,614</td>
<td>28,415</td>
<td>801</td>
<td>2.9%</td>
<td></td>
</tr>
<tr>
<td>(less) One-Time Relief</td>
<td>-</td>
<td>(226)</td>
<td>(226)</td>
<td>(0.8%)</td>
<td></td>
</tr>
<tr>
<td>Educational and General Fee</td>
<td>779</td>
<td>784</td>
<td>5</td>
<td>0.6%</td>
<td></td>
</tr>
<tr>
<td>Subtotal Tuition and E &amp; G Fee</td>
<td>28,393</td>
<td>28,973</td>
<td>580</td>
<td>2.0%</td>
<td></td>
</tr>
<tr>
<td>Comprehensive Fee</td>
<td>2,154</td>
<td>2,244</td>
<td>90</td>
<td>4.2%</td>
<td></td>
</tr>
<tr>
<td><strong>Total Cost for Nonresidents</strong></td>
<td><strong>30,547</strong></td>
<td><strong>31,217</strong></td>
<td><strong>670</strong></td>
<td><strong>2.2%</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Off-Campus Programs

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>2021-22</th>
<th>Increase</th>
<th>Charge Base</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resident</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition</td>
<td>15,167</td>
<td>15,607</td>
<td>440</td>
<td>2.9%</td>
<td></td>
</tr>
<tr>
<td>(less) One-Time Relief</td>
<td>-</td>
<td>(124)</td>
<td>(124)</td>
<td>(0.8%)</td>
<td></td>
</tr>
<tr>
<td>Educational and General Fee</td>
<td>175</td>
<td>180</td>
<td>5</td>
<td>2.9%</td>
<td></td>
</tr>
<tr>
<td>Subtotal Tuition and E &amp; G Fee</td>
<td>15,342</td>
<td>15,663</td>
<td>321</td>
<td>2.1%</td>
<td></td>
</tr>
<tr>
<td>Northern Virginia Center Student Services Fee</td>
<td>148</td>
<td>151</td>
<td>3</td>
<td>2.0%</td>
<td></td>
</tr>
<tr>
<td><strong>Total Cost for Residents</strong></td>
<td><strong>15,490</strong></td>
<td><strong>15,814</strong></td>
<td><strong>324</strong></td>
<td><strong>2.1%</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>2021-22</th>
<th>Increase</th>
<th>Charge Base</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nonresident</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition</td>
<td>29,559</td>
<td>30,416</td>
<td>857</td>
<td>2.9%</td>
<td></td>
</tr>
<tr>
<td>(less) One-Time Relief</td>
<td>-</td>
<td>(242)</td>
<td>(242)</td>
<td>(0.8%)</td>
<td></td>
</tr>
<tr>
<td>Educational and General Fee</td>
<td>779</td>
<td>784</td>
<td>5</td>
<td>0.6%</td>
<td></td>
</tr>
<tr>
<td>Subtotal Tuition and E &amp; G Fee</td>
<td>30,338</td>
<td>30,958</td>
<td>620</td>
<td>2.0%</td>
<td></td>
</tr>
<tr>
<td>Northern Virginia Center Student Services Fee</td>
<td>148</td>
<td>151</td>
<td>3</td>
<td>2.0%</td>
<td></td>
</tr>
<tr>
<td><strong>Total Cost for Nonresidents</strong></td>
<td><strong>30,486</strong></td>
<td><strong>31,109</strong></td>
<td><strong>623</strong></td>
<td><strong>2.0%</strong></td>
<td></td>
</tr>
</tbody>
</table>
### VIRGINIA TECH

#### TOTAL COST TO STUDENTS

Comparison of 2020-21 and 2021-22 Annual Charges

<table>
<thead>
<tr>
<th>VETERINARY MEDICINE</th>
<th>2020-21 Charge</th>
<th>2021-22 Base</th>
<th>Increase $</th>
<th>Increase %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virgin/Maryland Students</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition</td>
<td>21,906</td>
<td>22,462</td>
<td>556</td>
<td>2.5%</td>
</tr>
<tr>
<td>(less) One-Time Relief</td>
<td>-</td>
<td>(157)</td>
<td>(157)</td>
<td>(0.7%)</td>
</tr>
<tr>
<td>Educational and General Fee</td>
<td>175</td>
<td>180</td>
<td>5</td>
<td>2.9%</td>
</tr>
<tr>
<td>Comprehensive Fee</td>
<td>2,154</td>
<td>2,244</td>
<td>90</td>
<td>4.2%</td>
</tr>
<tr>
<td>Vet Med Facility Fee</td>
<td>1,200</td>
<td>1,200</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>Total Cost for Virginia/Maryland Students</strong></td>
<td>25,435</td>
<td>25,929</td>
<td>494</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nonresident Students</th>
<th>2020-21 Charge</th>
<th>2021-22 Base</th>
<th>Increase $</th>
<th>Increase %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition</td>
<td>50,435</td>
<td>51,459</td>
<td>1,024</td>
<td>2.0%</td>
</tr>
<tr>
<td>(less) One-Time Relief</td>
<td>-</td>
<td>(289)</td>
<td>(289)</td>
<td>(0.6%)</td>
</tr>
<tr>
<td>Educational and General Fee</td>
<td>779</td>
<td>784</td>
<td>5</td>
<td>0.6%</td>
</tr>
<tr>
<td>Comprehensive Fee</td>
<td>2,154</td>
<td>2,244</td>
<td>90</td>
<td>4.2%</td>
</tr>
<tr>
<td>Vet Med Facility Fee</td>
<td>1,200</td>
<td>1,200</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>Total Cost for Nonresident Students</strong></td>
<td>54,568</td>
<td>55,398</td>
<td>830</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

### VIRGINIA TECH CARILION SCHOOL OF MEDICINE

| Tuition | 53,113 | 54,653 | 1,540 | 2.9% |
| (less) One-Time Relief | - | (434) | (434) | (0.8%) |
| Educational and General Fee | 175 | 180 | 5 | 2.9% |
| VTCSOM Student Services Fees (a) | 1,132 | 1,192 | 60 | 5.3% |
| **Total Cost for VTCSOM Students** | 54,420 | 55,591 | 1,171 | 2.2% |

(a) VTCSOM Student Services, Health Services, Student Government/Activities, and Recreational Sports fees (M1, M2, & M3 only).

Presentation Date: March 21, 2021
<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deborah</td>
<td>Student</td>
<td>I guess I am just wondering when the tuition and fees increases are going to stop? You keep increasing the cost of attendance to Virginia Tech but the fact is, there is not a commensurate increase in compensation across the country. This include in my graduate student stipend. You have talked constantly about increasing diversity and being inclusive at Virginia Tech but simultaneously make it impossible for people with financial barriers to attend or keep attending your institution. And people with financial barriers are more often than not the case for those diverse people you say you want on your campus. So I ask you, when will the increases stop?</td>
</tr>
<tr>
<td>Tracy Franco</td>
<td>Parent</td>
<td>We hope everything will be done not to raise tuition and/or fees. We were paying full tuition but with many cases this year not receiving the full benefit of full time instruction. Almost all of our son’s classes for the past 2 semesters were asynchronous online. In several instances the professors taped only one lecture for a week and students were to watch on their own, obviously not being able to ask questions. Living on campus this year, our son has not used the classrooms nor many of the services for which we have paid full price. We have had to pay grub hub fees for 2 semesters on top of everything else. Many of us feel that we have not received value for what we have paid particularly with regard to instruction.</td>
</tr>
<tr>
<td>Charles Parker</td>
<td>Student</td>
<td>Hello ~ I would just ask the Board to consider that for the 2020-2021 school year undergraduate students paid over two thousand dollars total (Fall &amp; Spring) for fees such as rec sports fee, student activity fee, student cultural activities and athletic fee. This was all during the pandemic when activities were limited, virtual or non-existent. In the Spring of 2020, the change was sudden and unexpected, but this current school year, adjustments should have been made for some fees. I understand that fees such as the health fee or library fee are necessary. Please consider the extent of what students paid this year for fees given the pandemic and what may or may not occur for the upcoming year. At minimum, no fee increases should be permitted. Thank you for your time.</td>
</tr>
<tr>
<td>Kase Poling</td>
<td>Student</td>
<td>I understand the fact that it takes a considerable amount of resources and capital to operate a university as large as Virginia Tech. We offer a variety of programs that are invaluable to students and the world they will go on to serve. What I do not understand is why the University believes it necessary to increase costs while the country is in a continued state of economic crisis. Students and their families are already stretched thin with costs as it is. Has the University considered pursuing business initiatives that could help to finance operations and alleviate economic pressure on students? We are a land-grant university, not Harvard. If our goal is to educate the masses, why are we only making it harder to do so?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I am writing to encourage the Board of Visitors to keep current tuition and fee rates the same for the upcoming year. Please do not increase the cost of tuition and fees. While it is important to properly fund things like facility maintenance and improvements, faculty and staff raises, and other important expenses, it is equally important to keep a Virginia Tech education affordable and not increase the financial strain on undergraduate and graduate students alike. This has been a challenging year for everyone and I encourage you to please not put any additional financial hardship on students. Sincerely, A passionate Hokie</td>
</tr>
</tbody>
</table>
Dear members of the Board of Visitors,

It is an unfortunate case to learn that our BoV is looking to increase the fees for graduate (and undergraduate) students, especially now in a time of crisis that is striking the financial stability of many students and families. And since this issue is returning for a second year, I would like to reiterate my own previous comments.

I hoped to share a small part of my experiences as I chose to come to VT to become an expert in my field, and help develop technology that could be utilized in many industrial applications (I am an electrical engineer). One of the major considerations that I factored while comparing various universities included the stipends, comprehensive fees, cost of medical insurance, and cost of living. Right now Blacksburg is having a spike in increase of cost of living which is caused by the expansion of the University population. In addition, this expansion is causing an increase in our fees. If I look back and was considering to come to VT over other institutions...I would have serious pause to recognize that the comprehensive fees have increased numerous times over the past few years while stipends have not matched this increase.

While I am very fortunate to attend this institution, and to learn from my advisers and educators around me, I am burdened financially by the overall "grad tax" that these fees represent. I try to do my best to represent my lab and VT to the greater community and my professional field, but it is difficult to feel a sense of support if that community is asking for more and more from me without providing additional support- I have had opportunities to work in multiple national laboratories and present my work at top tier conferences nationally and internationally. As of right now, the graduate comprehensive fees are about 10% of my overall income and general livelihood. So, I find myself with serious decisions each month after paying my comprehensive fee.

With all the issues that have been raised and recognized by the University in the past year, especially food security for students, as well as now the impact that the COVID-19 outbreak is adding to already stressed students, I hope the BoV looks for solutions that will add support to the graduate student population. Recognizing the issues that graduate students face and providing gestures of support will reverberate throughout the university as we make up much of the foundation of success - we support students as teaching assistance, we mentor students in research initiatives, and we conduct cutting edge research in the laboratories.

We graduate students chose to attend VT because of the community and sense of UT Prosim that reverberates across campus. We want to be successful and speak of the great experiences we have had attending games at Lane stadium, walking around the duck pond, and presenting our work at conferences; and so I hope that you hear our voices and our stories with regards that the continued financial stress of the comprehensive fees bring. While this increase in fees might be necessary, the overall lack of support experienced in the graduate community will echo into future years of research, teaching, recruitment, and retention.

I thank you all for your consideration and patience to all graduate student stories, as well as your service and dedication to ensure VT remains a premier institution.

Joseph Kozak
Student
<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samantha Student</td>
<td>Student</td>
<td>I will first state that tuition and fees should not be raised. Virginia Tech already costs way too much. For a student like me who does not receive any financial support from Tech or anyone else, only federal loans, a decision to raise fees will only hurt me. I can barely afford the expenses I have now. I rarely have any money left over at the end of the month to be able to buy food for me to eat. I survive on 49 cent macaroni and cheese as my food because I can not afford to buy anything else after rent and utilities are paid. Raising the fees will only cause me and other students more pain. The only aid that I qualify for is federal loans from the government. Whatever it does not cover, it is left up to me to find a way. I receive no support from my family and I have to pay for everything. I have many times went hungry or without just to be able to afford a monthly payment of tuition that Tech wants me to pay. So while you voting on if you should raise the tuition, think about me and imagine if your daughter was in a situation like mine and living off macaroni because she can not afford anything else.</td>
</tr>
<tr>
<td>Noel Norris</td>
<td>Parent</td>
<td>I would ask the university to first and foremost look internally for areas where cost can be reduced before automatically implementing a increase in tuition. I read a statement from one of the local news outlets stating that professors needed a 5% salary increase. Considering the cost that the university and students have incurred as a result of COVID I think a 5% raise is ludicrous. I have spent 25 years in the healthcare sector in upper management roles. Some years the organization could only offer 1 or 2% raises and in other years when we were highly profitable the organization was able to pass along 3 to 5% increases. It appears that the university is selecting to pass a cost of living increase onto its employees and not taking into consideration the students cost of living. Housing is not cheap by any means in Blacksburg. We are stuck with 12 month leases when our students are elsewhere working or doing an internship on the summer. I would ask the university to think outside the box and ask your employees to share where they see waste and use those ideas to improve processes and reduce expenses before increasing tuition. Offer an incentive for winnings ideas; it is a win win for employee moral, the university and its students. The university should also think about creating a Finance Innovation program where business students could be involved in creating and implementing Lean Six Sigma projects that are aligned to reduce waste, keep the university fiscally stable and allowing VT to be a leader in innovation. The faculty and students are equally important to the university therefore increases in salary and fees/tuition must be equally aligned. Thank you.</td>
</tr>
<tr>
<td>Anonymous Student</td>
<td>Student</td>
<td>As a freshman at Virginia Tech, having a sham of a freshman year and still paying full price hurt. Now you are thinking about raising the prices on something I have yet to experience. Shame on you.</td>
</tr>
<tr>
<td>Manisha Chaudhari</td>
<td>Parent</td>
<td>As an out of state parent, I do not want tuition or fees to go up. Can the endowment fund ($1.2 Billion) be used to help? Thank you for your time.</td>
</tr>
<tr>
<td>Larkin Rae</td>
<td>Student</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>---------</td>
<td></td>
</tr>
</tbody>
</table>
| Coming from a low income family to Virginia Tech, relying solely on student loans, there is a lot of financial stress in my life that makes attending higher education difficult and stressful. When I look at my current tuition and fees, I already question why I am being charged for some of the things charged. There are already hefty fees for things like the Recreational sports fee, which quite honestly I don’t have the time to engage in because of my course load. So there I find issues with justifying fees that I don’t engage in. It is especially thought provoking that 30,000+ students pay these fees for the small portion of the community that have time to engage in recreational sports or student cultural activities, etc.

It is hard for me to understand why more money should be taken from students who are already struggling.

Thank you for your time if you read this. |

<table>
<thead>
<tr>
<th>Julie Hollis</th>
<th>Parent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dear BOV of Va Tech,</td>
<td></td>
</tr>
</tbody>
</table>
| Please take into consideration the lack of instruction and accessibility to an adequate education that the students have endured for the last two and one-half semesters when the issue of raising tuition is discussed. Professors/instructors can claim to have provided enriching and engaging instruction over the course of the last two and one-half semesters however, this has not been the case. Professors have uploaded PowerPoints for students with no additional discussion or in-depth instruction happening. Others have assigned chapters to read from the textbook and then never once provided any instruction on the material prior to a quiz or test. While your argument for having to raise tuition is due in part to having to increase employees’ benefits per the state, I have to ask has the university been fiscally responsible with the millions that it received from the CARES Act in 2020? If the university is filing for a second draw, that money can also be used for salaries/benefits instead of increasing tuition. In our current economic times, when so many parents and students have lost income due to an over-the-top reaction to a cold virus with a 99.4% survival rate, an increase in the already exorbitant cost of attending Va Tech is a hard pill to swallow.

In addition, students have had to pay thousands in fees for services and activities that they have not been allowed to access. There has been no indication that Timothy Sands, or anyone in the administration, has gone to Richmond to advocate for the students. Instead, the administration has shamed, guilted, isolate, and called for students to turn on one another. The Va Tech campus and community have been nothing but subjects in research that the university received millions to conduct.

Instead of considering a tuition and fees increase, consider fully opening the university back up to the students which will, in turn, raise revenue. Universities across the country have already stated that classes will be in-person in the fall, and all student activities will resume at normal levels. My rising Junior and incoming Freshman need to know if they need to commit to Va Tech for the fall, or if they need to look at other universities where they will be allowed to be college students and access all that tuition and fees cover. |
<p>| Sincerely, Julie Hollis |</p>
<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kela Rosario</td>
<td>Parent</td>
<td>I am a parent of a freshman, a part time wage employee and a spouse to a staff member at VT. I feel strongly that our students and their parents have carried the heaviest burden of change at VT during this pandemic with largely virtual and asynchronous courses, required to pay for housing that at times they have not been able to use as students have returned home due to virtual courses and isolation in the apartments and dorm rooms. They have continued to take loans to pay for fees and services as well as tuition as if it was a normal year. To ask the students and their parents to pay additional tuition at this time is insensitive and not equitable. Other universities have asked the management staff to accept a step back in salary of a small percentage to help make the necessary budgetary adjustments for the coming year. As someone who as witnessed multiple appointed (ie not through a hiring search) high level positions continue to be created during this time - including many that, at least in my perspective, represent a redundancy in our administrative systems, it seems there are other places that the necessary funds could be identified without further burdening the students, many of whom may come from families that have been specifically impacted by COVID impacts. Thank you for your efforts in keeping a college education affordable.</td>
</tr>
</tbody>
</table>
| Nancy Rider | Parent   | I write to urge you not to increase tuition or fees for the coming year:  
1. Many families are still struggling financially from the pandemic and cannot afford additional expenses.  
2. Instead please utilize savings from operational expenses, such as utilities, janitorial services, and maintenance, that accrued while most of the campus was shut down for a year.  
3. Forty billion dollars is set aside for colleges and universities from the Covid Relief Bill, in addition to generous transfers to the commonwealth. This money should be used toward meeting next year’s plan rather than increased tuition and fees.  
4. Finally, the education value for this past year has been abysmal. If anything, students should receive a partial refund for tuition.  
Thank you,  
Nancy Rider |
Good Afternoon Members of the Board of Visitors and university officials,

My name is Miles Taylor Guth, and I have the honor and duty of serving as the Student Government Association president for this semester. As SGA President, it is my responsibility to represent the voice of the 29,000 undergraduate students at Virginia Tech. Recently, I released an anonymous survey to the students, on behalf of SGA, that allowed them to share their thoughts and opinions on the proposed tuition and fee policy for the upcoming academic year. My speech today is entirely based on the comments received in this survey and other discussions with my colleagues in governance.

Before asking the students any questions about the proposed policy, we asked if they had read the article released in the VT news about this topic, in order to make sure the student’s comments were well-founded and based on factual knowledge of the policy. 92.5% of the respondents indicated that they had read the article in its entirety. We then asked students about their approval of the policy, and 93% chose the answer stating “I am not in support of the plan. I do not understand why Virginia Tech needs to increase the cost of tuition and I would like a smaller increase or none at all.”

Students also voiced that they feel as though they do not know where the money goes and what it is used for. Many respondents indicated that they would be much more comfortable with the proposition if they understood what the university uses their fees for and how that helps the university operate. Based upon the suggestions I have heard and discussed with other university officials during meetings, I think a beneficial action, could be an Official VT release of details for the finances of the institution. This could explain where, how much, and why the fees are needed. By releasing this information, the greater VT community will develop a better understanding of the university’s financial allocation policies, and thus a greater appreciation for the rationale behind the institution’s financial policy decisions.

Before closing my statement, I would like to share my personal thoughts on this proposition. The most challenging part of this choice is the difficult balancing act that is necessary. On one hand, the university functions much like a business. We have operating costs and we have revenue sources to cover those costs. Altering our financial policies ensures that the university can operate effectively for the students, faculty, and staff. However, there is also the importance of the student’s input and feedback. Even more challenging, though, is that no student comes from the same financial situation. No two students are going to think the same way about this policy, because every student will be impacted differently by it. Trying to make the correct choice and satisfy both sides is quite difficult, and I commend you for listening to the voice of the students.
I very much appreciate the opportunity to speak with you and represent my fellow students today. I firmly believe that, when making difficult decisions, listening is half the battle.

Thank you.
March 8th, 2021

To the Members of the Board of Visitors,

It is with distinct pleasure that I, Maruf Hoque, have the opportunity to represent the graduate and professional student body of Virginia Tech as the President of the Graduate Student Assembly. I wish I were able to bring positive news in my update today, but I would like to use the next minute to describe the status of graduate life at Virginia Tech.

First, the stipend data obtained from the Graduate School and Dean DePauw, indicates that the average graduate student at VT has a monthly salary of $2,155 (9 months). About 3 weeks ago, the GSA launched a survey to gauge the Cost of Living of a graduate student at VT. The survey currently has 970 responses. We will be collecting responses for another week and will release our results by the end of the month. Our preliminary data states that on average, graduate students are paying: $827/month for rent, $228/month for utilities (water, heat, electric, internet, & cell phone), $255/month Federal/state income taxes, $367/month for comprehensive fees, $120/month in health/dental insurance premiums, much more in monthly out of pocket medical costs, and $200 month for commuting (parking, auto insurance, gasoline, & vehicle tax). This leaves the average graduate student only $158 a month to get groceries and plan for any potential emergency that may happen. This also does not factor in 3 months of pay that many graduate students do not receive due to lack of a 12 month assistantship.

Furthermore, market reports (obtained from VP Student Affairs, Frank Shushok) indicate that rent in the New River Valley is projected to increase approx. 3.3% annually, outpacing the national average. Increasing rents in the NRV, tagged with a 3% increase in tuition, and $90 increase in comp. fees further cut into the $158 that graduate students are left with.

Advancing Beyond Boundaries presented several strategic goals deemed essential to advancing VT’s reputation and position for the next decade and beyond. Of the goals cited in the strategic vision, a number are directly dependent on the activities and work of our graduate teaching and research assistants. We must ask ourselves will the final take-home pay of $158 allow us to recruit and retain future talent to VT’s graduate programs.

As a community, we cannot be in the same place year after year. We ask that you take a serious look at graduate stipends and compensation packages to make VT more competitive and to achieve the initiatives presented by Beyond Boundaries. We ask that the Board of Visitors along with the Graduate School:

1) Create a timeline for the implementation of the 14 recommendations recommended by the Graduate Education Task Force Report,
2) Convert all 9-month assistantships to 12-month assistantships,
3) Provide multi-year stipend offers to all accepted graduate students, and most importantly,
4) Offset any increase in tuition/fees with an increased stipend for all graduate students.

Respectfully,

Maruf M. Hoque
President, Graduate Student Assembly (2020-2021)
Good morning, board members. Last year, Virginia Tech elected to freeze tuition in light of the COVID-19 pandemic. The student body is thankful for that and it tells us that you hear us, the students, when we have something to say. I hope that you will maintain the freeze and not raise our comprehensive fees in the next academic term.

I don’t tell this story often, because I’m not looking for sympathy, but I think it articulates our need to ensure that we are approaching college from the lens of access. I stayed in Blacksburg this summer and had to pay just under $5000 for my summer tuition. Living from stipend to stipend, I had to ensure I was living on a budget. So I picked up the cheapest sub-lease I could find. This meant I was sharing a 4-bedroom apartment with 6 other roommates. Two of my roommates were hard drug users and would stay up late into the night screaming at each other while experiencing bad trips while I hid behind a locked bedroom door 3 feet away. I never knew who would be coming in and out of the apartment and would often wake up to find strangers passed out on the living room floor. My diet consisted of peanut butter and jelly sandwiches and noodles for most of the Summer, as I attempted to cut costs. To top it all off, my 9-5 was spent working my internship and my nights were spent working at Wendy’s, to make a little extra cash. This is what I could afford.

Think back to your college days and how much a break on tuition would have meant to you. To not have to work those extra hours late into the night to make rent. It was an uncomfortable situation. I didn’t always feel safe, but I made it work. This articulates a simple fact. Students are the most vulnerable population to be drawing from while we continue to suffer the throws of the pandemic. I lived there for two months. I got out of it. My roommates did not. Neither did my neighbors. There is a reality that many students are living paycheck to paycheck to make their dream of receiving an education from Virginia Tech a reality.

If we are to truly embody the spirit of Ut Prosim that we all hold dear to us, then I ask you, please spare us another fee. These costs are adding up. And sometimes attracting the best and the brightest to our institution doesn’t mean having the newest and the shiniest technology. It just means ensuring that others can afford to come here.

Thank you for your time.

Sabrina Sturgeon
Graduate Student
Good afternoon and thank you for allowing me time to speak today,

I know I only have 3 minutes so I will keep my comments brief. My name is Kase Poling and I am a masters student in the civil engineering department.

I have the pleasure of representing my fellow civil engineering graduate students in the Graduate Student Assembly, and all of my fellow masters students on the Commission on Student Affairs.

This year has been one of incredibly trying circumstances for everyone, but perhaps no one more than college students. We have had to face being isolated from our peers, the difficulties of online classes, and serious financial strain due to the pandemic. You see, the industries hardest hit by the pandemic are also the industries where many students, especially graduate students, work to help make ends meet. Additionally, many students have had internships and co-op’s cancelled. While the various stimulus packages have helped our nation through these times, not all of the stimulus packages have applied to college students because of various differences in legal and taxation statuses. All of this is simply to say, many college students are hurting.

Now, I recognize that the university is also facing financial strain and that there are a lot of expenditures important to the university’s operations that are in need of funding. I understand the desire to meet these needs by simply raising tuition and fees, but I implore you to reject this thinking and vote to keep tuition and fees at the current rate for another year. Please ask yourselves this question: “What is the central mission of Virginia Tech?”. I have come to know Virginia Tech as a university that puts immense value on not only students’ learning, but also their quality of life and wellbeing. Many students are not able to afford basic necessities because of the skyrocketing costs of tuition, fees, educational materials, not to mention the impacts from the pandemic.

Members of the Board, please vote to keep Virginia Tech students’ education and wellbeing as the university’s top priority and keep tuition and fees at the current rate for another year.

I sincerely thank you for your time.

Kase Poling
Graduate Student
Background

Graduate students who work as graduate assistants while pursuing their master’s or doctoral degrees provide a valuable service to the university. Many teach undergraduate classes while others support faculty in scholarly and sponsored research activities. To be competitive in the recruitment and retention of high quality graduate students, it is important for the university to provide compensation packages that are comparable with those offered by peer institutions. The key components of the total compensation package are a stipend, tuition assistance, and health insurance benefit.

Graduate Stipends

One of the primary goals of Virginia Tech during the 1980’s was to build a graduate compensation program that was competitive with those offered by comparable institutions. Across the campus, graduate assistants have a variety of responsibilities. To recognize the differences in services performed by these students, the university created a stipend scale that defines ranges of stipend amounts, providing academic and support unit’s flexibility in compensating graduate assistants. The levels within the stipend table have been adjusted over the years to remain competitive.

To respond to increasing competition for quality graduate students among peer institutions, the graduate student stipend scale was revised for Fall 2003 to better position Virginia Tech departments as compared to their national peers and reflect the minimum stipend levels authorized by the National Science Foundation. The Fall 2004 stipend scale added 10 additional stipend steps, numbered 41-50, to increase the university’s competitive position in attracting outstanding Ph.D. students. In 2004-05, the graduate stipend scale was enhanced to encompass the current 50 pay ranges (Attachment). These ranges provide flexibility in situations where a defined level of resources does not exactly match one of the existing steps, and allow for an actual stipend to be established within the range of a step.

In 2011-12, an academic year fixed dollar supplement was added to the graduate stipend scale to help offset university assigned costs such as the Health Services fee. As a result, the graduate assistant stipend is currently comprised of two components: 1) a base stipend and 2) a fixed supplement. For administrative efficiency and processing, the two components are combined into the traditional stipend scale. As of January 25, 2021, the current average monthly stipend for full-time graduate assistants is $2,169 per month, which falls within step 14 of the 2020-21 stipend scale.
Tuition Assistance

In the 1990’s, the university developed a more comprehensive program of tuition remission for graduate students serving on assistantships. The tuition program is financed by four sources including: the General Fund appropriation for graduate student financial assistance, a tuition remission program in the Educational and General budget, tuition payments planned in the budgets of externally sponsored grants and contracts, and private funds. The tuition remission program for graduate students on assistantship includes the remission of tuition, mandatory E&G fees (excluding the state assigned Commonwealth Capital and Equipment Fee), and non-executive graduate program fees. Tuition remission benefits are provided on a per-semester basis for the duration of the contracted period.

In the case of an early termination of an assistantship, tuition remission benefits are prorated to align with the portion of the semester completed, as displayed on Table 1.

<table>
<thead>
<tr>
<th>Number of Weeks Into Semester When Assistantship is Terminated</th>
<th>Student Tuition &amp; E&amp;G Fee Obligation</th>
<th>Department Tuition &amp; E&amp;G Fee Obligation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than Four</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Four through less than Eight</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>Eight through less than Twelve</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Twelve through less than Sixteen</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>Sixteen or more (full semester)</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Health Insurance

At the March 2001 meeting of the Board of Visitors, a health insurance program for graduate students on assistantship was approved as a part of the graduate student compensation package to enhance the university’s competitiveness in recruiting highly qualified graduate students. The program was designed to help full-time graduate students receiving a full or partial assistantship, including graduate research assistants, graduate teaching assistants, and graduate assistants, offset a portion of the cost of health insurance premiums. In 2009-10, university management worked with representatives of the graduate student community to review and improve the overall mix and value of benefits provided through the health insurance program; these enhancements were approved by the Board and included in the program for 2010-11. For the 2018-19 academic year, the Board of Visitors approved a health insurance subsidy rate of 88 percent for graduate assistants, matching the university’s share of other employee health insurance programs.

In order to qualify for health insurance, full-time graduate students must have a 50 percent or greater appointment. Graduate students also have the option to decline coverage if they so choose. In 2020-21, the university provided 88 percent of the $3,173 annual premium cost of the plan to 1,966 graduate students. The plan provided for a $450 in-network annual deductible, $6,250 per-person out-of-pocket maximum, $25 co-pay for in-network doctors’
visits, and an unlimited maximum benefit. Students can obtain optional dental benefits for an additional cost.

**Proposed Graduate Assistant Compensation Plan for 2021-22**

The university proposes the following actions:

- Advancing the stipend scale for 2021-22 by implementing a 5.0 percent increase effective August 10, 2021, consistent with the state’s approved employee compensation plan.
- Maintaining the current academic year Stipend Supplement of $458 to help mitigate university assigned costs.
- Continuing the university share of the graduate assistant health insurance coverage at 88 percent, based upon the university’s current estimate the cost of graduate student insurance coverage.
- Continue the graduate tuition remission program.

**RECOMMENDATION**

That the graduate assistant compensation program for 2021-22 be approved.

March 22, 2021
### 2021-22 Full-Time Graduate Monthly Stipend Compensation

**Effective August 10, 2021**

<table>
<thead>
<tr>
<th>Step</th>
<th>Monthly Base</th>
<th>Supplement</th>
<th>Total Stipend</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AY</td>
<td></td>
<td>Monthly</td>
</tr>
<tr>
<td></td>
<td>2021-22</td>
<td></td>
<td>2021-22</td>
</tr>
<tr>
<td>Step 1</td>
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</tr>
<tr>
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<td>$1,609</td>
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<tr>
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<td>$1,668</td>
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<tr>
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<tr>
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<tr>
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<tr>
<td>Step 43</td>
<td>$3,985</td>
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<td>Step 44</td>
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<td>$4,223</td>
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<td>Step 49</td>
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<td>Step 50</td>
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Financial Performance Report – Operating and Capital

FINANCE AND RESOURCE MANAGEMENT COMMITTEE

July 1, 2020 to December 31, 2020

The Financial Performance Report of income and expenditures is prepared from two sources: actual accounting data as recorded at Virginia Tech and the annual budgets which are also recorded in the university accounting system. The actual accounting data reflect the modified accrual basis of accounting, which recognizes revenues when received rather than when earned and commitments to buy goods and services as encumbrances when obligated and as an expenditure when paid. The Original Budget was approved by the Board of Visitors at the June meeting. The Adjusted Budget reflects adjustments to incorporate actual experience or changes made during the fiscal year. These changes are presented for review and approval by the Finance and Resource Management Committee and the Board of Visitors through this report. Where adjustments impact appropriations at the state level, the university coordinates with the Department of Planning and Budget to ensure appropriations are reflected accurately.

The July to December 2020-21 budget (year-to-date) is prepared from historical data which reflects trends in expenditures from previous years as well as known changes in timing. Differences between the actual income and expenditures and the year-to-date budget may occur for a variety of reasons, such as an accelerated or delayed flow of documents through the accounting system, a change in spending patterns at the college level, or increases in revenues for a particular area.

Quarterly budget estimates are prepared to provide an intermediate measure of income and expenditures. Actual revenues and expenditures may vary from the budget estimates. The projected year-end budgets are, however, the final measure of budgetary performance.

**RECOMMENDATION:**

That the report of income and expenditures for the University Division and the Cooperative Extension/Agricultural Experiment Station Division for the period of July 1, 2020 through December 31, 2020 and the Capital Outlay report be approved.

March 22, 2021
## Operating Budget 2020-21

### Presentation Date: March 21, 2021

**July 1, 2020 to December 31, 2020**

<table>
<thead>
<tr>
<th>Revenues</th>
<th>Original</th>
<th>Adjusted</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
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<td>0</td>
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<tr>
<td>CARES Act Revenue</td>
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<td>5,692</td>
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<tr>
<td>Total Revenues</td>
<td>$462,431</td>
<td>$851,413</td>
<td>$51,921</td>
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</table>

**Expenses**

<table>
<thead>
<tr>
<th>Expenses</th>
<th>Original</th>
<th>Adjusted</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Programs</td>
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<td>1,394</td>
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**Net**

<table>
<thead>
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<th>Net</th>
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<tbody>
<tr>
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### CE/AES Division

<table>
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<td>15,647</td>
<td>7 (15)</td>
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<tr>
<td>All Other Income</td>
<td>761</td>
<td>950</td>
<td>0</td>
</tr>
<tr>
<td>Revenue Contingency</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>CARES Act Revenue</td>
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**Expenses**

<table>
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<th>Original</th>
<th>Adjusted</th>
<th>Change</th>
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</thead>
<tbody>
<tr>
<td>Academic Programs</td>
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<tbody>
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### Auxiliary Enterprises

<table>
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<th>Revenues</th>
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<th>Change</th>
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<tr>
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<td>15,647</td>
<td>7 (15)</td>
</tr>
<tr>
<td>All Other Income</td>
<td>761</td>
<td>950</td>
<td>0</td>
</tr>
<tr>
<td>Revenue Contingency</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CARES Act Revenue</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Total Revenues</td>
<td>$152,208</td>
<td>$355,254</td>
<td>$2,896 (18)</td>
</tr>
</tbody>
</table>

**Expenses**

<table>
<thead>
<tr>
<th>Expenses</th>
<th>Original</th>
<th>Adjusted</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Programs</td>
<td>$-169,377</td>
<td>$-355,254</td>
<td>$2,896</td>
</tr>
<tr>
<td>Support Programs</td>
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<td>-321,446</td>
<td>0</td>
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<td>Reserve Drawdown/(Deposit)</td>
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<td>57,657</td>
</tr>
<tr>
<td>Total Expenses</td>
<td>$-336,392</td>
<td>$-321,446</td>
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</table>

**Net**

<table>
<thead>
<tr>
<th>Net</th>
<th>Original</th>
<th>Adjusted</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
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### Sponsored Programs

<table>
<thead>
<tr>
<th>Revenues</th>
<th>Original</th>
<th>Adjusted</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>$152,208</td>
<td>$355,254</td>
<td>$2,896</td>
<td></td>
</tr>
<tr>
<td>Federal Appropriation</td>
<td>6,818</td>
<td>15,647</td>
<td>7 (15)</td>
</tr>
<tr>
<td>All Other Income</td>
<td>761</td>
<td>950</td>
<td>0</td>
</tr>
<tr>
<td>Revenue Contingency</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CARES Act Revenue</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Total Revenues</td>
<td>$152,208</td>
<td>$355,254</td>
<td>$2,896 (18)</td>
</tr>
</tbody>
</table>

**Expenses**

<table>
<thead>
<tr>
<th>Expenses</th>
<th>Original</th>
<th>Adjusted</th>
<th>Change</th>
</tr>
</thead>
<tbody>
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<td>$-355,254</td>
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<tr>
<td>Support Programs</td>
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<td>-321,446</td>
<td>0</td>
</tr>
<tr>
<td>Reserve Drawdown/(Deposit)</td>
<td>-5,003</td>
<td>52,654</td>
<td>57,657</td>
</tr>
<tr>
<td>Total Expenses</td>
<td>$-336,392</td>
<td>$-321,446</td>
<td>0</td>
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**Net**

<table>
<thead>
<tr>
<th>Net</th>
<th>Original</th>
<th>Adjusted</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
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### Student Financial Assistance

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<th>Change</th>
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<tbody>
<tr>
<td>$16,778</td>
<td>$35,962</td>
<td>$4,284 (19)</td>
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</tr>
<tr>
<td>Federal Appropriation</td>
<td>6,818</td>
<td>15,647</td>
<td>7 (15)</td>
</tr>
<tr>
<td>All Other Income</td>
<td>761</td>
<td>950</td>
<td>0</td>
</tr>
<tr>
<td>Revenue Contingency</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total Revenues</td>
<td>$16,778</td>
<td>$35,962</td>
<td>$4,284 (19)</td>
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</table>

**Expenses**

<table>
<thead>
<tr>
<th>Expenses</th>
<th>Original</th>
<th>Adjusted</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Programs</td>
<td>$-16,801</td>
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</tr>
<tr>
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<td>Reserve Drawdown/(Deposit)</td>
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<tr>
<td>Total Expenses</td>
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**Net**

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<thead>
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<th>Change</th>
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<tbody>
<tr>
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### All Other Programs *

<table>
<thead>
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<th>Revenues</th>
<th>Original</th>
<th>Adjusted</th>
<th>Change</th>
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</thead>
<tbody>
<tr>
<td>$8,628</td>
<td>$15,839</td>
<td>$5,625 (20)</td>
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</tr>
<tr>
<td>Federal Appropriation</td>
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<td>0</td>
</tr>
<tr>
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<td>0</td>
</tr>
<tr>
<td>Reserve Drawdown/(Deposit)</td>
<td>-5,990</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total Revenues</td>
<td>$841,794</td>
<td>$1,618,923</td>
<td>$-13,568</td>
</tr>
</tbody>
</table>

**Expenses**

<table>
<thead>
<tr>
<th>Expenses</th>
<th>Original</th>
<th>Adjusted</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Programs</td>
<td>$-2,638</td>
<td>$-13,770</td>
<td>$3,556 (20)</td>
</tr>
<tr>
<td>Support Programs</td>
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</tr>
<tr>
<td>Reserve Drawdown/(Deposit)</td>
<td>-5,990</td>
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<td>0</td>
</tr>
<tr>
<td>Total Expenses</td>
<td>$-8,628</td>
<td>$-13,770</td>
<td>$3,556</td>
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</tbody>
</table>

**Net**

<table>
<thead>
<tr>
<th>Net</th>
<th>Original</th>
<th>Adjusted</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
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### Total University

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<th>Original</th>
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<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>$841,794</td>
<td>$1,618,923</td>
<td>$-13,568</td>
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</tr>
<tr>
<td>Federal Appropriation</td>
<td>2,638</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>All Other Income</td>
<td>2,638</td>
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<td>0</td>
</tr>
<tr>
<td>Reserve Drawdown/(Deposit)</td>
<td>-5,990</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total Revenues</td>
<td>$841,794</td>
<td>$1,618,923</td>
<td>$-13,568</td>
</tr>
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</table>

**Expenses**

<table>
<thead>
<tr>
<th>Expenses</th>
<th>Original</th>
<th>Adjusted</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Programs</td>
<td>$-8,628</td>
<td>$-13,770</td>
<td>$3,556</td>
</tr>
<tr>
<td>Support Programs</td>
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</tr>
<tr>
<td>Reserve Drawdown/(Deposit)</td>
<td>-5,990</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total Expenses</td>
<td>$-15,628</td>
<td>$-13,770</td>
<td>$3,556</td>
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**Net**

<table>
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<td>$-7,210</td>
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* All Other Programs include federal work study, surplus property, local funds, and unique military activities.
OPERATING BUDGET

1. All Other Income revenues are lower than projected due to lower Continuing Education activity level and the timing of revenues in the newly established Animal Cancer Care and Research Center.

2. Expenditures are lower than projected due to timing and the impact of the university’s essential spending order in response to COVID-19 pandemic.

3. The budget for federal revenue is established to match projected allotments from the federal government that are expected to be drawn down during the state fiscal year. All expenses in federal programs are covered by drawdowns of federal revenue up to allotted amounts. Federal revenue in the Cooperative Extension and Agriculture Experiment Station Division is lower than projected due to the timing of federal expense.

4. Quarterly and projected annual variances are explained in the Auxiliary Enterprises section of this report.

5. Historical patterns have been used to develop a measure of the revenue and expenditure activity for Sponsored Programs. Actual revenues and expenses may vary from the budget estimates because projects are initiated and concluded on an individual basis without regard to fiscal year. Total sponsored research revenues and expenditures are lower than projected. The sponsored expenditures are 5.6% lower than December 31, 2019.

6. The federal government allocated $9.7 million of CARES Act support to provide emergency financial grants to students, of which $8.9 million was awarded and reimbursed in fiscal year 2019-20. The remaining $0.8 million was awarded and reimbursed in early fiscal year 2020-21.

7. Expenses for All Other Programs were lower than projected due to timing and lower than projected Surplus Property activity.

8. The annual budget for the University Division General Fund was decreased $0.29 million for the state share of salary and fringe benefit rate changes and increased $4.0 million for a one-time allocation to support operations, aid or other purposes to address the COVID-19 impact.

9. In late June, the budget for Tuition and Fees was increased $14.0 million for planned Fall 2020 enrollment growth. After summer census, the tuition and fee budget was increased by $8.1 million for higher than projected summer 2020 enrollment. After fall census, the tuition and fee budget was decreased $4 million for lower than projected nonresident freshman and graduate enrollments. The corresponding expenditure budgets have been adjusted accordingly.

10. The All Other Income revenue budget for the University Division were increased $0.6 million for lower than projected revenues in the College of Veterinary Medicine Teaching Hospital, the establishment of the Animal Cancer Care and Research Center and the ViTALs Lab in the College of Veterinary Medicine, decreased $1.7 million for Continuing Education Program revenues, decreased $0.2 million for the temporary suspension of the Campus to Campus shuttle service, and increased $0.8 million for other income adjustments. The corresponding expenditure budgets have been adjusted accordingly.

11. The University Division revenue budget was increased $25 million to remove the revenue contingency established for potential financial impacts due to COVID-19. The corresponding expenditure budget increase includes restoration of 2% of the preliminary expenditure budget reductions in the University Division. A 3% budget reduction remains to manage cost escalation, unfunded mandates, the fall enrollment shortfall, and impacts of COVID-19.

12. The University Division revenue budget was increased $5.7 million to align the internal budget with the Commonwealth of Virginia’s allocation of Coronavirus Relief Funds in support of personal protective equipment, disinfectant, distance learning, telework, and public health costs. The corresponding expenditure budgets have been adjusted accordingly.

13. University Division E&G expenditure budget increased $1.4 million to reflect the carryforward of unexpected Coronavirus Relief Funds received in 2019-20 due to the timing of expenditures.

14. The Cooperative Extension/Agriculture Experiment State Division General Fund revenue budget was decreased $0.04 million for the state share of fringe benefit rate changes. The corresponding expenditure budgets have been adjusted accordingly.

15. The Cooperative Extension Federal Funds revenue budget was increased $0.01 million to align with federal appropriations. The corresponding expenditure budgets have been adjusted accordingly.
16. The Cooperative Extension/Agriculture Experiment Station budget was increased $3.0 million to restore the revenue contingency established in response to the uncertainty in state revenues. The corresponding expenditure budget increase will restore the 5.0% expenditure preliminary budget reduction in the Cooperative Extension/Agriculture Experiment Station.

17. The Agency 229 E&G revenue budget has been increased $0.002 million for CARES grant support received for the Tazewell VCE division. The corresponding expenditure budgets have been adjusted accordingly.

18. The annual budget for the Sponsored Programs has been increased $0.6 million to reflect the finalization of the enterprise fund budgets and $2.25 million to reflect the approved Commonwealth Cyber Initiative expenditure plan.

19. The Student Financial Assistance revenue and expenditure budgets were increased $4.1 million for finalization of the scholarship budget and technical accounting changes and $0.2 million for the SCHEV GEAR Up scholarship program.

20. The projected annual budgets for All Other Programs were increased $3.2 million to finalize budgets and $2.4 million for federal revenue earmarked for Kentland Farm capital lease. The projected annual expense budgets were increased $3.2 million to finalize budgets and $0.4 million for outstanding 2019-20 commitments that were initiated but not completed before June 30, 2020.
UNIVERSITY DIVISION
AUXILIARY ENTERPRISES
Dollars in Thousands

### Residence and Dining Halls *

<table>
<thead>
<tr>
<th></th>
<th>July 1, 2020 to December 31, 2020</th>
<th>Actual</th>
<th>Budget</th>
<th>Change</th>
<th>Original</th>
<th>Adjusted</th>
<th>Change</th>
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</thead>
<tbody>
<tr>
<td><strong>Revenues</strong></td>
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<tr>
<td><strong>Expenses</strong></td>
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<td>-54,172</td>
<td>6,268</td>
<td>-125,550</td>
<td>-111,546</td>
<td>14,004</td>
</tr>
<tr>
<td><strong>Reserve Drawdown/(Deposit)</strong></td>
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<td>-2,783</td>
<td>8,626</td>
<td>-11,409</td>
<td>-4,774</td>
<td>28,187</td>
<td>32,961</td>
</tr>
<tr>
<td><strong>Net</strong></td>
<td></td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

### Parking and Transportation

|                      |                                   | $8,285 | $8,338 | $-53   | $15,615  | $12,933  | $-2,682 |
| **Expenses**         |                                   | -4,396 | -4,910 | 514    | -14,628  | -14,521  | 107     |
| **Reserve Drawdown/(Deposit)** |                    | -3,889 | -3,428 | -461   | -987     | 1,588    | 2,575   |
| **Net**              |                                   | $0     | $0     | $0     | $0       | $0       | $0      |

### Telecommunications Services

|                      |                                   | $10,906| $10,893| $13    | $19,966  | $19,772  | $-194   |
| **Expenses**         |                                   | -8,659 | -10,003| 1,344  | -20,349  | -20,942  | -593    |
| **Reserve Drawdown/(Deposit)** |                    | -2,247 | -890   | -1,357 | -933     | 1,170    | 787     |
| **Net**              |                                   | $0     | $0     | $0     | $0       | $0       | $0      |

### University Services * **

|                      |                                   | $28,576| $29,382| $-806  | $52,883  | $51,358  | $-1,525 |
| **Expenses**         |                                   | -26,838| -31,141| 4,303  | -52,140  | -55,197  | -3,057  |
| **Reserve Drawdown/(Deposit)** |                    | -1,738 | 1,759  | -3,497 | -743     | 3,839    | 4,582   |
| **Net**              |                                   | $0     | $0     | $0     | $0       | $0       | $0      |

### Intercollegiate Athletics *

|                      |                                   | $22,887| $22,143| $744   | $74,740  | $51,149  | $-23,591|
| **Expenses**         |                                   | -36,553| -39,529| 2,976  | -70,480  | -69,346  | -1,134  |
| **Reserve Drawdown/(Deposit)** |                    | 13,666 | 17,386 | -3,720 | -4,260   | 18,197   | 22,457  |
| **Net**              |                                   | $0     | $0     | $0     | $0       | $0       | $0      |

### Electric Service *

|                      |                                   | $14,285| $14,339| $-54   | $33,653  | $30,462  | $-3,191 |
| **Expenses**         |                                   | -15,751| -16,182| 611    | -33,032  | -30,865  | 2,167   |
| **Reserve Drawdown/(Deposit)** |                    | 1,286  | 1,843  | -557   | -621     | 403      | 1,024   |
| **Net**              |                                   | $0     | $0     | $0     | $0       | $0       | $0      |

### Inn at VT/Skelton Conf. Center

|                      |                                   | $1,839 | $1,929 | $-90   | $11,471  | $3,321   | $-8,150 |
| **Expenses**         |                                   | -4,663 | -5,296 | 633    | -11,597  | -8,376   | 3,221   |
| **Reserve Drawdown/(Deposit)** |                    | 2,824  | 3,367  | -543   | 126      | 5,055    | 4,929   |
| **Net**              |                                   | $0     | $0     | $0     | $0       | $0       | $0      |

### Other Enterprise Functions ***

|                      |                                   | $15,289| $14,001| $1,288 | $11,407  | $16,438  | $5,031  |
| **Expenses**         |                                   | -3,167 | -4,491 | 1,324  | -8,616   | -10,653  | -2,037  |
| **Reserve Drawdown/(Deposit)** |                    | -12,122| -9,510 | -2,612 | -2,791   | -5,785   | -2,994  |
| **Net**              |                                   | $0     | $0     | $0     | $0       | $0       | $0      |

### TOTAL AUXILIARIES

|                      |                                   | $152,754| $146,571| $6,183 | $350,059 | $268,792 | $81,267 |
| **Expenses**         |                                   | -147,751| -165,724| 17,973 | -336,992 | -321,446 | 14,946  |
| **Reserve Drawdown/(Deposit)** |                    | -5,003 | 19,153  | -24,156| -13,667  | 52,654   | 66,321  |
| **Net**              |                                   | $0     | $0     | $0     | $0       | $0       | $0      |

* University Systems include Dormitory and Dining Hall System, University Services System, Intercollegiate Athletics System, and Electric Service System. The Systems were created to provide assurance to bond holders that system revenues are pledged for the payment of debt service and to allow for dedicated repair and replacement that are not subject to liens of any creditor of the university.

** University Services System includes Career & Professional Development, Center for the Arts, Health Services, Recreational Sports, Student Engagement & Campus Life, Cultural and Community Centers, Student Organizations, and the VT Rescue Squad.

*** Other Enterprise Functions include Golf Course, Hokie Passport, Library Café, Library Photocopy, Licensing & Trademark, Little Hokie Hangout, New Student and Family Programs, Pouring Rights, Printing Services, Software Sales, Tailor Shop and Clearing Accounts.
AUXILIARY ENTERPRISE BUDGET

1. Revenues in Residence and Dining Halls is higher than projected due to higher than anticipated meal plan revenues and quarantine space agreements. Expenses are lower than projected due to holding back expenditures and timing of operating expenses. A third quarter budget adjustment is anticipated to further align the budget for anticipated spring business volume.

2. Expenses in Telecommunications Services are lower than projected due to holding back expenditures and timing of network telecommunication projects.

3. Revenues for the University Services System are lower than projected due to timing of pouring rights contract payments and lower than projected recreational sports self-generated revenues. Expenses are lower than projected due to timing of operating expenses and decreased business volume.

4. Revenues for Intercollegiate Athletics are higher than projected due to better than projected ACC Network revenues, partially offset by timing of pouring rights contract payments. Expenses are lower than projected due to lower business volume and timing of operating expenses. A third quarter budget adjustment is anticipated to further align the budget for additional financial impacts of the pandemic. Note, due to a delay in timing, Athletic revenues includes $5.1 million radio partner and $4.8 million ACC network revenue budgeted in 2019-20 but received in 2020-21.

5. Revenues for Other Enterprise Functions are higher than projected due to higher than budgeted student enrollment. Expenses are lower than projected due to timing of operating expenses and decreased business volume.

6. In late June, the annual revenue, expense, and reserve budgets for Auxiliary Enterprises were adjusted for technical alignments and finalization of fixed cost estimates.

7. The annual revenue, expense, and reserve budgets for Auxiliary Enterprises were adjusted to align budgets for the known financial impacts (through December 31, 2020) of the COVID-19 pandemic as summarized in the table below:

<table>
<thead>
<tr>
<th>COVID-19 Budget Impact on Auxiliary Enterprises</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Residence and Dining Halls</td>
</tr>
<tr>
<td>Expenses</td>
</tr>
<tr>
<td>Reserve Drawdown(Addition)</td>
</tr>
<tr>
<td>Parking and Transportation</td>
</tr>
<tr>
<td>Expenses</td>
</tr>
<tr>
<td>Reserve Drawdown(Addition)</td>
</tr>
<tr>
<td>University Services System</td>
</tr>
<tr>
<td>Revenue</td>
</tr>
<tr>
<td>Expenses</td>
</tr>
<tr>
<td>Reserve Drawdown(Addition)</td>
</tr>
<tr>
<td>Intercollegiate Athletics</td>
</tr>
<tr>
<td>Revenue</td>
</tr>
<tr>
<td>Expenses</td>
</tr>
<tr>
<td>Reserve Drawdown(Addition)</td>
</tr>
<tr>
<td>Electric Service</td>
</tr>
<tr>
<td>Revenue</td>
</tr>
<tr>
<td>Expenses</td>
</tr>
<tr>
<td>Reserve Drawdown(Addition)</td>
</tr>
<tr>
<td>Inn at Virginia Tech &amp; Skeilor Conf Center</td>
</tr>
<tr>
<td>Revenue</td>
</tr>
<tr>
<td>Expenses</td>
</tr>
<tr>
<td>Reserve Drawdown(Addition)</td>
</tr>
<tr>
<td>Other Enterprise Functions</td>
</tr>
<tr>
<td>Revenue</td>
</tr>
<tr>
<td>Expenses</td>
</tr>
<tr>
<td>Reserve Drawdown(Addition)</td>
</tr>
<tr>
<td>TOTAL AUXILIARIES</td>
</tr>
<tr>
<td>Revenue</td>
</tr>
<tr>
<td>Expenses</td>
</tr>
<tr>
<td>Reserve Drawdown(Addition)</td>
</tr>
</tbody>
</table>
8. The annual expense budget for Auxiliary Enterprises was increased $8.0 million for outstanding 2019-20 commitments and projects that were initiated but not completed before June 30, 2020. This amount includes $2.3 million in Recreational Sports commitments and projects, $1.6 million for Dining Services, $0.8 million for Telecommunications, and $0.4 million for Electric Service. The remainder is spread across the other auxiliary programs.

9. The annual expense budgets for University Services System were increased $0.2 million for Schiffert Health Center compensation market alignment.

10. The annual revenue and reserve budgets for Intercollegiate Athletics were decreased $1.7 million for lower pre-pandemic ACC conference distributions. Annual revenue, expense, and reserve budgets were increased $0.3 million for private support of four football positions, $1.1 million for Student Athlete Performance Center debt service, and $0.7 million for operating scholarship support.

11. The annual expense budget for the Electric Service auxiliary was decreased $0.7 million for debt service alignment for Lane Substation capital project savings.

12. The annual revenue and expense budgets for Other Enterprise Functions were increased $7.6 million for the Commonwealth of Virginia’s Coronavirus Relief Funding, Pouring Rights contract operating expenses, and scholarship expenses in Licensing and Trademark.
### Educational and General Projects

#### Design Phase

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Fiscal Year Activity</th>
<th>Annual Initiated</th>
<th>Annual YTD</th>
<th>State Support</th>
<th>Nongeneral Support</th>
<th>Revenue</th>
<th>Total Budget</th>
<th>Project Expenditures</th>
<th>Cumulative Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock &amp; Poultry Research Facilities, Phase I</td>
<td>Oct 2016</td>
<td>$9,500</td>
<td>$447</td>
<td>-</td>
<td>-</td>
<td></td>
<td>$25,274</td>
<td>$25,274</td>
<td>$1,621</td>
</tr>
<tr>
<td>Planning: Hitt Hall &amp; New Dining</td>
<td>Apr 2017</td>
<td>1,500</td>
<td>120</td>
<td>-</td>
<td>6,000</td>
<td>-</td>
<td>6,000</td>
<td>-</td>
<td>3,598</td>
</tr>
<tr>
<td>Planning: Undergraduate Science Laboratory Building</td>
<td>Jul 2017</td>
<td>1,110</td>
<td>298</td>
<td>-</td>
<td>5,516</td>
<td>-</td>
<td>5,516</td>
<td>-</td>
<td>4,616</td>
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<tr>
<td>Commonwealth Cyber Initiative</td>
<td>May 2019</td>
<td>667</td>
<td>209</td>
<td>1,500</td>
<td>-</td>
<td>-</td>
<td>1,500</td>
<td>-</td>
<td>1,043</td>
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<tr>
<td>Corps Leadership and Military Science Building</td>
<td>Jun 2019</td>
<td>4,500</td>
<td>1,211</td>
<td>-</td>
<td>20,650</td>
<td>-</td>
<td>31,350</td>
<td>52,000</td>
<td>2,825</td>
</tr>
<tr>
<td>Data and Decision Science Building</td>
<td>Jul 2019</td>
<td>10,500</td>
<td>2,286</td>
<td>69,000</td>
<td>-</td>
<td>10,000</td>
<td>79,000</td>
<td>-</td>
<td>4,678</td>
</tr>
<tr>
<td>Innovation Campus - Academic Building</td>
<td>Jul 2019</td>
<td>20,000</td>
<td>7,309</td>
<td>168,000</td>
<td>-</td>
<td>107,000</td>
<td>275,000</td>
<td>-</td>
<td>8,940</td>
</tr>
<tr>
<td>Planning: Randolph Hall Replacement</td>
<td>Jul 2020</td>
<td>3,000</td>
<td>-</td>
<td>-</td>
<td>11,000</td>
<td>-</td>
<td>11,000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Life, Health, Safety, Accessibility, &amp; Code Compliance</td>
<td>Jul 2020</td>
<td>300</td>
<td>0</td>
<td>3,100</td>
<td>-</td>
<td>-</td>
<td>3,100</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Fralin Biomedical Research Institute Equipment</td>
<td>Jul 2020</td>
<td>6,000</td>
<td>-</td>
<td>18,133</td>
<td>-</td>
<td>-</td>
<td>18,133</td>
<td>-</td>
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</table>

#### Construction Phase

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Fiscal Year Activity</th>
<th>Annual Initiated</th>
<th>Annual YTD</th>
<th>State Support</th>
<th>Nongeneral Support</th>
<th>Revenue</th>
<th>Total Budget</th>
<th>Project Expenditures</th>
<th>Cumulative Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance Reserve</td>
<td>On-going</td>
<td>11,600</td>
<td>5,806</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>16,099</td>
<td>16,099</td>
<td>5,806</td>
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<tr>
<td>Chiller Plant Phase II</td>
<td>Oct 2016</td>
<td>16,000</td>
<td>4,423</td>
<td>32,655</td>
<td>10,312</td>
<td>-</td>
<td>42,968</td>
<td>27,854</td>
<td>8,274</td>
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<tr>
<td>Holden Hall Renovation</td>
<td>Oct 2016</td>
<td>36,000</td>
<td>13,276</td>
<td>57,215</td>
<td>212</td>
<td>17,500</td>
<td>74,927</td>
<td>24,366</td>
<td>14 (13)</td>
</tr>
<tr>
<td>Construct Virginia Seafood AREC</td>
<td>Jul 2018</td>
<td>2,500</td>
<td>141</td>
<td>2,500</td>
<td>-</td>
<td>-</td>
<td>2,500</td>
<td>-</td>
<td>141 (14)</td>
</tr>
</tbody>
</table>

#### Close-Out

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Fiscal Year Activity</th>
<th>Annual Initiated</th>
<th>Annual YTD</th>
<th>State Support</th>
<th>Nongeneral Support</th>
<th>Revenue</th>
<th>Total Budget</th>
<th>Project Expenditures</th>
<th>Cumulative Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve Kentland Facilities</td>
<td>Sep 2013</td>
<td>3,100</td>
<td>2,507</td>
<td>12,463</td>
<td>-</td>
<td>-</td>
<td>12,463</td>
<td>11,328</td>
<td>12,463</td>
</tr>
<tr>
<td>VTC Biomedical Research Expansion</td>
<td>Oct 2016</td>
<td>8,784</td>
<td>1,362</td>
<td>51,554</td>
<td>5,267</td>
<td>34,875</td>
<td>91,696</td>
<td>82,274</td>
<td>(15)</td>
</tr>
<tr>
<td>Gas-Fired Boiler at the Central Steam Plant</td>
<td>Apr 2017</td>
<td>1,600</td>
<td>753</td>
<td>-</td>
<td>8,200</td>
<td>-</td>
<td>8,200</td>
<td>7,398</td>
<td>(17)</td>
</tr>
<tr>
<td>Acquisition: Falls Church Property</td>
<td>Apr 2019</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2,850</td>
<td>-</td>
<td>2,850</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Total Educational and General Projects**

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Annual Initiated</th>
<th>Cumulative Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL EDUCATIONAL AND GENERAL PROJECTS</td>
<td>$136,661</td>
<td>$186,327</td>
</tr>
</tbody>
</table>

**Presentation Date:** March 21, 2021
1. **Livestock & Poultry Research Facilities, Phase I**: This project is the first of two phases to renew existing facilities for the livestock and poultry programs. The scope includes 126,000 gross square feet of facilities at the Blacksburg campus and three nearby university production and research farms. Invitation for bids for the beef facility is underway. Construction contracts are underway for the swine, poultry, and equine facilities. Bid packages for three hay barns and demolition of certain facilities are under development.

2. **Planning: Hitt Hall & New Dining**: This planning project is for Hitt Hall and houses an expansion of Myers-Lawson School of Construction, a new dining center, and other academic spaces. Project is in schematic design with advancement into preliminary design expected late January 2021.

3. **Planning: Undergraduate Science Laboratory Building**: This planning project is for an entirely state funded 102,000 gross square foot science laboratory building adjacent to the new classroom building. The university is temporarily funding the project and the state will reimburse the university when construction funding is appropriated. Working drawings were completed September 25, 2020. The university is requesting 2021 General Assembly Session.

4. **Commonwealth Cyber Initiative**: This project makes improvements to support the Commonwealth Cyber Initiative Hub renovations, space enhancements, and equipment. The maximum appropriation from the Commonwealth is $3.5 million.

5. **Corps Leadership and Military Science Building**: The project consolidates the Corps of Cadets and ROTC programs in the northern portion of the Upper Quad project. A Guaranteed Maximum Price within budget has been finalized.

6. **Data and Decision Science Buildings**: This project will design and construct a new 120,000 gross square foot instruction building. The Guaranteed Maximum Price received December 2020 was within budget with construction anticipated February 2021.

7. **Innovation Campus – Academic Building**: This project is a new 300,000 gross square foot academic building as part of the Innovation Campus in Alexandria Virginia. Preliminary design is underway.

8. **Planning: Randolph Hall Replacement**: This planning project will design the replacement of Randolph Hall with a 284,000 gross square foot building to accommodate engineering instruction and research. A/E procurement is underway. The university will request construction funding as part of the 2023 state budget call.

9. **Life, Health, Safety, Accessibility, & Code Compliance**: This project improves pedestrian connectors to ensure accessible service in the North Academic District. Schematic design is underway.

10. **Fralin Biomedical Research Institute Equipment**: This funding supports the VTC Biomedical Expansion project located in Roanoke and will provide the equipment authorized by the 2020 Acts of Assembly.

11. **Maintenance Reserve**: The total project budget reflects $2.73 million of carryforward from fiscal year 2020 and the State’s fiscal year 2021 appropriation of $13.73 million. The annual budget amount reflects the pace necessary to meet the state’s 85 percent spending performance requirement by June 30, 2021.

12. **Chiller Plant Phase II**: This project upgrades campus utility systems and addresses several strategic priorities by shifting the campus to a lower resource consuming cooling service with improved redundancies. Completion expected August 2021.

13. **Holden Hall Renovation**: This project will renovate 20,000 gross square feet, demolish 21,000 gross square feet, and construct an 80,000 gross square foot expansion of Holden Hall. Construction is underway with substantial completion expected early January 2022.

14. **Construct Virginia Seafood AREC**: Through a collaborative effort between the university, the Foundation, and the City of Hampton, the existing facility will be replaced with this new 15,000 gross square foot facility. The Foundation received a successful construction bid and substantial completion is expected September 2021.

15. **Improve Kentland Facilities**: The project is substantially complete and the total cost is expected to be $12.463 million. The project may be closed and financial accounts terminated when final invoices are received and paid.

16. **VTC Biomedical Research Expansion**: The project is substantially complete and the total cost is expected to be $89.696 million. The project may be closed and financial accounts terminated when final invoices are received and paid.

17. **Gas-Fired Boiler at the Central Steam Plant**: This project is substantially complete and the total cost is expected to be $8.2 million. The project may be closed and financial accounts terminated when final invoices are received and paid.

18. **Acquisition: Falls Church Property**: This project was established to acquire the fee simple title to the 5.33 acres currently leased from and owned by the City of Falls Church for a net cost of $2.85 million. The exercise date is calendar year 2021, and the university is working with the City of Falls Church on this transaction.
Capital Outlay Projects Authorized as of December 31, 2020 (Continued)

Dollars in Thousands

<table>
<thead>
<tr>
<th>PROJECT ANNUAL INITIATED</th>
<th>FISCAL YEAR ACTIVITY</th>
<th>TOTAL PROJECT BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STATE BUDGET EXPENDITURES</td>
<td>NONGENERAL REVENUE</td>
</tr>
<tr>
<td></td>
<td>SUPPORT BOND BUDGET EXPENDITURES</td>
<td></td>
</tr>
</tbody>
</table>

**AUXILIARY ENTERPRISE PROJECTS**

**Design Phase**

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Initiated</th>
<th>Annual Budget</th>
<th>YTD Expenditures</th>
<th>State Support</th>
<th>Nongeneral Revenue</th>
<th>Total Budget</th>
<th>Cumulative Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Wellness Improvements</td>
<td>Jun 2016</td>
<td>$10,000</td>
<td>$66</td>
<td></td>
<td>$13,310</td>
<td>$44,690</td>
<td>$58,000</td>
</tr>
<tr>
<td>Planning: Tennis Center Improvements</td>
<td>Aug 2016</td>
<td>584</td>
<td>69</td>
<td>-</td>
<td>809</td>
<td>809</td>
<td>294</td>
</tr>
<tr>
<td>Dietrick First Floor and Plaza Renovation</td>
<td>Sept 2017</td>
<td>2,000</td>
<td>23</td>
<td>-</td>
<td>5,000</td>
<td>3,300</td>
<td>8,300</td>
</tr>
<tr>
<td>Dietrick Planning: Slusher Hall Replacement</td>
<td>Jun 2018</td>
<td>10</td>
<td>9</td>
<td>-</td>
<td>3,500</td>
<td>3,500</td>
<td>1,264</td>
</tr>
<tr>
<td>Global Business &amp; Analytics Complex Residence Halls</td>
<td>Jun 2019</td>
<td>1,100</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>84,000</td>
<td>84,000</td>
</tr>
<tr>
<td>New Upper Quad Residence Hall</td>
<td>Jun 2019</td>
<td>3,500</td>
<td>701</td>
<td>-</td>
<td>-</td>
<td>40,000</td>
<td>1,535</td>
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</table>

**Construction Phase**

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Initiated</th>
<th>Annual Budget</th>
<th>YTD Expenditures</th>
<th>State Support</th>
<th>Nongeneral Revenue</th>
<th>Total Budget</th>
<th>Cumulative Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance Reserve</td>
<td>On-going</td>
<td>15,000</td>
<td>6,884</td>
<td>-</td>
<td>15,000</td>
<td></td>
<td>15,000</td>
</tr>
<tr>
<td>Creativity &amp; Innovation District LLC</td>
<td>Oct 2016</td>
<td>44,000</td>
<td>25,314</td>
<td>-</td>
<td>15,880</td>
<td>89,620</td>
<td>105,500</td>
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</tbody>
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**Close-Out**

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Initiated</th>
<th>Annual Budget</th>
<th>YTD Expenditures</th>
<th>State Support</th>
<th>Nongeneral Revenue</th>
<th>Total Budget</th>
<th>Cumulative Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lane Substation Expansion</td>
<td>Sept 2015</td>
<td>17</td>
<td>17</td>
<td>-</td>
<td>2,000</td>
<td>4,500</td>
<td>6,500</td>
</tr>
<tr>
<td>Student-Athlete Performance Center</td>
<td>Mar 2018</td>
<td>8,400</td>
<td>7,158</td>
<td>-</td>
<td>20,417</td>
<td>-</td>
<td>20,417</td>
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<tr>
<td>Athletics Weight Room Renovation &amp; Expansion</td>
<td>Aug 2018</td>
<td>2,000</td>
<td>1,674</td>
<td>-</td>
<td>4,500</td>
<td>-</td>
<td>4,500</td>
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</tbody>
</table>

**TOTAL AUXILIARY ENTERPRISE PROJECTS**

<table>
<thead>
<tr>
<th></th>
<th>Annual Budget</th>
<th>YTD Expenditures</th>
<th>Total Budget</th>
<th>Cumulative Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$86,611</td>
<td>$41,917</td>
<td>$346,525</td>
<td>$115,243</td>
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</table>

**GRAND TOTAL**

<table>
<thead>
<tr>
<th></th>
<th>Annual Budget</th>
<th>YTD Expenditures</th>
<th>Total Budget</th>
<th>Cumulative Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$223,272</td>
<td>$82,065</td>
<td>$1,074,751</td>
<td>$301,570</td>
</tr>
</tbody>
</table>

Presentation Date: March 21, 2021
**Auxiliary Enterprise Projects**

1. **Student Wellness Improvements**: The project scope and budget includes refurbishments to War Memorial Hall and McComas Hall. Whiting-Turner is the construction manager and the Guaranteed Maximum Price received July 2020 is 33% over budget. The university is developing a path forward to deliver the project within budget by adjusting the project scope.

2. **Planning: Tennis Center Improvements**: Working drawings are underway. The university may request full project authorization once planning is complete and Athletics has raised the necessary funds to complete construction.

3. **Dietrick First Floor and Plaza Renovation**: This project refurbishes the first floor of Dietrick Hall, inserting a modern food service venue, enclosing a portion of the overhang, and improvements to the outdoor plaza. The low bid received May 2020 was over budget. The university has developed a path forward to implement the improvements to Dietrick Hall with the approved budget and to seek private support for improvements to the outdoor plaza, which may be implemented separately when private support is secured.

4. **Planning: Slusher Hall Replacement**: This planning project includes completing preliminary designs for the replacement of Slusher Hall. The initial programming is over budget. The university is exploring alternative development approaches to deliver this project and the Global Business & Analytics Complex Residence Halls project.

5. **Global Business & Analytics Complex Residence Halls**: This project provides two residence halls in the northwest corner of campus with a minimum of 700 beds. The initial programming is over budget. The university is exploring alternative development approaches to deliver this project and the Slusher Hall Replacement project.

6. **New Upper Quad Residence Hall**: This project will provide the Corps of Cadets an additional 300 beds while replacing Femoyer Hall. Preliminary design is underway. A $7 million supplement was approved at the November 2020 Board of Visitors meeting increasing the total project authorization from $33 million to $40 million. Working drawings are underway with pricing expected June 2021.

7. **Maintenance Reserve**: The auxiliary maintenance reserve program covers 106 assets with a total replacement value of $1.4 billion. Projects are scheduled and funded by the auxiliary enterprises. The units prepare five-year plans that outline their highest priority deferred maintenance needs. The annual budget and total project budget reflect the spending plans of the auxiliary units on maintenance reserve work scheduled for fiscal year 2021.

8. **Creativity & Innovation District Living Learning Community (LLC)**: This project is a new residential community with approximately 596 beds, including 176 beds for student-athletes, and academic collaborative spaces to support creativity and innovation programs. Construction is underway with completion expected July 2021.

9. **Lane Substation Expansion**: The project is closed and will be removed from the report at the end of the fiscal year.

10. **Student-Athlete Performance Center**: The project is substantially complete and the total cost is expected to be $20.417 million. The project may be closed and financial accounts terminated when final invoices are received and paid.

11. **Athletics Weight Room Renovation & Expansion**: The project is substantially complete and the total cost is expected to be $4.5 million. The project may be closed and financial accounts terminated when final invoices are received and paid.
Open Session Agenda

GOVERNANCE AND ADMINISTRATION COMMITTEE

1872 Salon, The Inn at Virginia Tech
12:00 – 12:30 pm
March 22, 2021

OPEN SESSION

<table>
<thead>
<tr>
<th>Agenda Item</th>
<th>Reporting Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Welcome and Opening Remarks</td>
<td>Mr. Mehul Sanghani, Chair</td>
</tr>
<tr>
<td>2. Approval of Minutes of November 16, 2020, Meeting</td>
<td>Mr. Mehul Sanghani</td>
</tr>
<tr>
<td>* 3. Resolution to Approve the Constitution and Bylaws for the A/P Faculty Senate</td>
<td>Mr. Mehul Sanghani, Ms. Holli Drewry</td>
</tr>
<tr>
<td>4. Future Agenda Items and Closing Remarks</td>
<td>Mr. Mehul Sanghani</td>
</tr>
</tbody>
</table>

* Requires Full Board Approval
Briefing Report

GOVERNANCE AND ADMINISTRATION COMMITTEE

March 22, 2020

OPEN SESSION

1. Welcome and Opening Remarks. Mr. Mehul Sanghani, Chair of the Governance and Administration Committee, will welcome committee members, guests, and invited participants.

2. Approval Minutes of the November 16, 2021, Meeting. The committee will consider for acceptance and approval the Minutes of the November 16, 2021, Meeting.

3. Resolution to Approve the Constitution and Bylaws for the Administrative and Professional (A/P) Faculty Senate. Ms. Holli Drewry, Chair of the Commission on Administrative and Professional Faculty Affairs, will introduce for committee review and approval the Resolution to Approve the Constitution and Bylaws for the Administrative and Professional (A/P) Faculty Senate.

4. Future Agenda Items and Closing Remarks. Mr. Mehul Sanghani, will discuss future agenda items for the committee. He will then offer closing remarks and request a motion for adjournment.
WHEREAS, University Council approved the Establishment of an Administrative and Professional (A/P) Faculty Senate (CAPFA Resolution 2019-20B) on February 17, 2020; and

WHEREAS, a task group comprised of A/P Faculty members with representation of the constituent groups met and drafted the proposed Constitution and Bylaws for the Administrative and Professional (A/P) Senate; and

WHEREAS, the Commission on Administrative and Professional Affairs members have provided their feedback and recommendations;

NOW, THEREFORE, BE IT RESOLVED that the initial length of terms of the elected senators in the inaugural A/P faculty senate be designated by election results; and

BE IT FURTHER RESOLVED that the attached Constitution and Bylaws for the Administrative and Professional Faculty Senate be approved.

Recommendation
That the above resolution confirming the Constitution and Bylaws for the Administrative and Professional Faculty Senate be approved.

March 22, 2021
Virginia Tech Administrative and Professional Faculty Senate
Constitution and Bylaws

Constitution

1. Name

The name of this organization is the Administrative and Professional Faculty Senate (hereinafter referred to as the A/P Faculty Senate) of Virginia Polytechnic Institute and State University.

2. Authority

1. The A/P Faculty Senate derives authority independently through the voice and intentions of the Administrative and Professional Faculty (hereinafter referred to as A/P Faculty), as described in the Faculty Handbook.
2. The existence of the A/P Faculty Senate does not preclude the existence of or the right of any university employee to belong to any other organization.

3. Purposes

The purposes of the A/P Faculty Senate are:

1. To serve as the representative body for the A/P Faculty employees of the University.
2. To act in an advisory capacity to the University administration and governance.
3. To appoint or recommend A/P Faculty representatives to University Council, Commissions, Advisory Councils, Committees, and other ad hoc committees as appropriate.
4. To provide a medium for the exchange of information between A/P Faculty and the university community.
5. To foster a spirit of unity and cooperation.
6. To provide referrals for individual concerns and problems to appropriate organizations or personnel.
7. To accept and share responsibility with the administration, staff, faculty, and students in all efforts to attain the stated goals of the University.
4. Membership

1. The A/P Faculty Senate will initially consist of thirty voting senators elected from among the following constituent areas, as defined in the faculty handbook, at the university: Extension, Research, Academic Support, Student Affairs, Athletics, General Professional, and General Administrative.

2. There will be six possible non-voting members representing university organizations:
   1. One representative from the Staff Senate,
   2. One representative from the Faculty Senate,
   3. One representative from the Student Government Association,
   4. One representative from the Graduate Student Assembly,
   5. Past-President of A/P Faculty Senate, if no longer serving as a senator,
   6. The senior university administrator responsible for Human Resources or their designee.

5. Term of office

1. The term of office for A/P Faculty Senators will be three years. Each term will begin on July 1. Terms will be staggered to permit the election of approximately one-third of the Senate body each year.

2. Transfer of a member from one constituent area to another will result in the replacement of that individual by the elected alternate until a permanent replacement is elected.

3. Movement of a member within the same constituent area will not affect their unexpired term on the A/P Faculty Senate.

4. A senator may be reelected for up to two consecutive three-year terms. There are no restrictions on serving as an alternate.

5. Vacancies may occur as a result of termination of employment, transfer, retirement, resignation, or by a majority vote of the A/P Faculty Senate to remove a senator following three consecutive unexcused absences from regular meetings during any calendar year.

6. The retiring President of the A/P Faculty Senate will serve as a non-voting advisor to the Executive Committee for one year. If their elected term as a senator has expired, they will serve as a non-voting member of the A/P Faculty Senate and Executive Committee.
6. Elections

1. Elections by the A/P Faculty Senate will be conducted in accordance with the A/P Faculty Senate Constitution and Bylaws.

7. Officers

1. Elected officers of the A/P Faculty Senate will consist of
   1. President,
   2. Vice President,
   3. Secretary/Treasurer,
   4. Parliamentarian.

2. Officers will be elected annually by the A/P Faculty Senators. Each term will begin at the end of the June regular meeting.

3. Officers will be eligible for re-election but may not serve more than two consecutive terms in the same office.

4. The A/P Faculty Senate may, by a two-thirds vote of the A/P Faculty Senate membership eligible to vote and present at the meeting, remove any officer.

5. In the event an officer, excluding the president, will take office and for some reason be unable or unwilling to complete their term of office, a special meeting will be called and a special election held to fill the vacated office for the remainder of the vacating officer's term.

6. In the event that the president for some reason is unable or unwilling to complete their term of office, the Bylaws address how the vacancy is to be handled.

8. University Council, Commissions, Advisory Councils, and Committees

1. Senators and A/P Faculty representatives to the University Council and Commissions will be elected by the A/P Faculty Senate in accordance with the Constitution and Bylaws of the University Council by a simple majority vote of the A/P Faculty Senate eligible to vote and present at the meeting. Nominations for election may include A/P Faculty Senators-elect. Terms of office and procedure to fill vacancies in unexpired terms are prescribed in the Constitution and Bylaws of the University Council.

2. Senators from the General Administrative constituent area will not be able to represent the A/P Faculty Senate on University Council.

3. Nominations of senators and A/P Faculty employees requested by the President or other administrator of the University to serve on University Advisory Councils and Committees will be approved by a majority vote of the A/P Faculty Senate. Nominations may include Senators-elect. Terms of appointment and responsibilities are prescribed in the Constitution and Bylaws of the University Council.
4. Senators and A/P Faculty representatives to the University Council, 
Commissions, Advisory Councils, or Committees will
   1. Represent the position of the A/P Faculty Senate and A/P Faculty in the 
discharge of responsibilities,
   2. Inform the A/P Faculty Senate of pertinent matters to be considered and 
action taken by either
      1. Forwarding copies of meeting minutes to the Secretary/Treasurer 
within ten business days after approval of minutes by the 
respective University Council, Commission, Advisory Council, or Committee, or
      2. Summarizing discussions and actions taken at meetings of each 
University Council, Commission, Advisory Council, or Committee 
and forwarding to the Secretary/Treasurer within ten business days 
after each meeting if no official minutes are kept at the meeting, 
and
      3. Bringing matters of A/P Faculty concern before the respective 
University Council, Commissions, Advisory Councils, or Committees.

9. Committees

The A/P Faculty Senate will form the following committees. The charge of each will be 
defined in the bylaws.

   1. An Executive Committee consisting of the President, Vice President, 
Secretary/Treasurer, Parliamentarian, Chair of each Senate standing committee, 
and the past-President of the A/P Faculty Senate serving in a non-voting advisory 
capacity.
   2. Standing Committees will initially consist of
      1. Policies and Issues Committee,
      2. Communications Committee, and
      3. Elections and Nominations Committee.
   3. The President of A/P Faculty Senate may designate standing, special, and/or ad 
hoc committees as approved by the A/P Faculty Senate.

10. Quorum

A quorum of the Senate or one of its committees is defined as a majority of the total 
eligible voting membership of the Senate or committee, respectively. A quorum is
required at all A/P Faculty Senate and committee meetings in order to conduct business. Meetings may be held without a quorum, but votes cannot be taken.

11. Initial Adoption of the Constitution and Bylaws

The Constitution will be ratified by a simple majority vote of the Commission on Administrative and Professional Faculty Affairs’ voting members and by the University Council, President of the University, and Board of Visitors.

12. Amendments to the Constitution

1. Notice of a proposal to amend the A/P Faculty Senate Constitution will be given on the A/P Faculty Senate agenda and considered at no fewer than two meetings of the Senate prior to voting.
2. A copy of the proposed amendments will be distributed with the agenda.
3. A vote may be taken on an amendment at the second meeting.
4. A two-thirds affirmative vote of the membership is required for approval of changes followed by approval by the University Council and president of the university.
5. One-fifth of employees eligible for election to the A/P Faculty Senate may petition the president of the university to convene employees eligible for election to the A/P Faculty Senate to make changes to the A/P Faculty Senate Constitution.
6. Amendments to the Constitution will become effective upon approval by the membership, University Council and president of the university.

13. Amendments to the Bylaws

1. Notice of proposal to amend the bylaws will be given in the agenda and considered at not fewer than two meetings of the A/P Faculty Senate prior to voting.
2. A vote may be taken at the second meeting.
3. An affirmative vote of the majority of the membership eligible to vote and present at the meeting is required for adoption.
4. Amendments to the bylaws will become effective upon approval of the A/P Faculty Senate.

14. Corrections to the Constitution and Bylaws
Corrections of typographical/grammatical errors and updating terminology, where appropriate, are permitted without going through the amendment process for both the Constitution and Bylaws. These corrections should be noted in the changelog.

**Bylaws**

1. **Duties of officers, senators, and non-voting members**

   All officers are responsible for ensuring a smooth transition to their successor and an orderly transfer of official records.

   1. **The President** will
      1. Preside at all regular and special meetings.
      2. Enforce all regulations and policies.
      3. Preside over the Executive Committee.
      4. Prepare the organizational chart of the Administrative and Professional Faculty Senate (hereinafter referred to as the A/P Faculty Senate).
      5. Submit the budget at the July regular meeting for approval each year.
      6. Call special meetings.
      7. Prepare an agenda for the Secretary to distribute to the Administrative and Professional Faculty Senators and non-voting members seven days prior to the next regular meeting.
      8. Authorize disbursement of funds. (Such disbursements will be made by the Secretary/Treasurer.)
      9. Designate chairs of the standing committees in consideration of committee recommendation.
      10. Establish ad hoc committees as approved by the A/P Faculty Senate, appoint members and designate chairs of these committees as appropriate.
      11. Perform other such duties as associated with this office.
      12. Ensure a smooth transition to the president-elect at the end of the president’s term and an orderly transfer of official records.

   2. **The Vice-President** will
      1. Preside in the absence of the President.
      2. Serve as the principal assistant to the President.
      3. Serve as Chair of the Commission on Administrative and Professional Faculty Affairs of University Governance.
      4. Coordinate legislative activity.
5. Fulfill any term vacated by the President.
6. Perform other such duties as associated with this office.

3. The Secretary/Treasurer will
1. Conduct a roll call, record attendance and advise the President if a quorum is present at the beginning of each meeting.
2. Prepare minutes of all A/P Faculty Senate meetings and maintain them as permanent records.
3. Distribute copies of the minutes to each member within ten days after meetings. The use of electronic mail is encouraged whenever possible.
4. Distribute copies of agenda and information packages to each member within seven days prior to the next regular meeting. The use of electronic mail is encouraged whenever possible.
5. Maintain all records of the A/P Faculty Senate including
   - Fiscal records,
   - Mailing lists (electronic and campus),
   - List of senators including term of office, and
   - List of senators serving on the University Council, Commissions, Advisory Councils and Committees including term of office.
6. Make authorized disbursements of funds. Submit quarterly financial reports of expenditures to the Executive Committee. Both the President and the Secretary/Treasurer will authorize all payments.
7. Perform other such duties as required by this office.
8. Receive and retain the summaries and/or minutes from Councils, Commissions, and Committees on which A/P Faculty serve.

4. The Parliamentarian will
1. Advise the President on parliamentary procedures in accordance with the parliamentary rules used by University Council, subject to special rules adopted by the A/P Faculty Senate to govern the procedures of the A/P Faculty Senate, cabinet, and standing committees.

5. The A/P Faculty Senators will
1. Make informed decisions.
2. Vote on matters brought before the A/P Faculty Senate.
3. Serve on at least one standing committee.
4. Serve on University Council, Commissions, Advisory Councils and Committees when appointed.
5. Communicate to their constituent area on issues brought before the A/P Faculty Senate.
6. Seek opinions of their constituent area on pertinent matters concerning the A/P Faculty Senate.
7. Represent the position of their constituent area and be accountable to their constituent area.

6. The Alternate Senators should
   1. Attend A/P Faculty Senate meetings whenever possible.
   2. Vote only when their senator is absent.
   3. Serve on University Councils, Commissions, Advisory Councils, and Committees when appointed.

7. All members will attempt to attend meetings of University Councils, Commissions, and Committees to which they are assigned. If unable to attend the member will send an alternate if possible.

2. Elections
   1. The elections for A/P Faculty Senators, from the constituent areas will be conducted by the Commission on Administrative and Professional Faculty Affairs before March 31 each year. This process will be assisted and monitored by the Elections and Nominations Committee.
   2. The number of Senators elected will be from the following constituent areas:
      - Extension: 3 Senators,
      - Research: 3 Senators,
      - Academic Support: 6 Senators,
      - Student Affairs: 3 Senators,
      - Athletics: 3 Senators,
      - General Professional: 9 Senators and,
      - General Administrative: 3 Senators

     Each constituent area will elect a minimum of one alternate to serve on the A/P Faculty Senate.
   3. The Elections and Nominations Committee will begin taking nominations for President, Vice President, Secretary/Treasurer, Parliamentarian, representatives to the University Council, Commissions, Advisory Councils, and Committees and other appointments at the February regular meeting.
   4. Permission must be obtained from candidates before names are placed in nomination.
5. Election of officers will be held by April 1. Election and/or nomination of representatives to the University Council, Commissions, Advisory Councils, and Committees and other appointments will be completed by May 1.

6. A majority vote of those present and voting will be necessary to elect officers and/or representatives. In case no candidate receives a majority, the candidate receiving the fewest votes will be removed from each successive ballot until one candidate receives a majority.

7. All those elected will assume responsibilities at the end of the June regular meeting.

8. The Vice President will automatically be nominated for the office of the President when a vacancy in that office will be slated to occur. If the Vice President’s term on the A/P Faculty Senate is expiring or the VP refuses the nomination then the Elections and Nominations Committee will be charged with finding another nominee from among the members of the Executive Committee or Past Presidents of the A/P Faculty Senate whose terms on the Senate are not expiring. If no member of the Executive Committee or a Past president will accept the nomination, the Election and Nominations Committee will open nominations for President up to the current Senators.

3. Committees
   1. Executive Committee
      1. Screens proposals from A/P Faculty for A/P Faculty Senate consideration,
      2. Acts on behalf of the A/P Faculty Senate between regular meetings. All such actions will be reported for confirmation at the next Senate meeting,
      3. Approves, by majority of those eligible to vote and present at the meeting, initial composition, changes and additions to the membership of standing committees made by the President,
      4. Implements the rules and regulations of the A/P Faculty Senate,
      5. Assists in interpreting the intent of the A/P Faculty Senate Constitution and Bylaws,
      6. Determines if a senator's absence from a regular meeting is excused,
      7. Assists the President in preparing the budget,
      8. Meets at least once a month prior to the regular Senate meeting, and
      9. Addresses occasional changes to the regular meeting schedule of the A/P Faculty Senate.
      10. Is sensitive to the inclusion of employees who are representative of the various types of full and part-time A/P Faculty employees, occupational classifications, and organizational units.
2. Standing Committees

1. General Guidelines

1. Members of standing committees will be appointed by the President and approved by a majority vote of the Executive Committee. The President will also designate a chair for each standing committee.
2. Unless requested by the senator, membership on a standing committee will not change during the senator's term of office.
3. Each member of the A/P Faculty Senate will serve on at least one standing committee.
4. Minutes will be kept for each standing committee meeting. Each standing committee will also submit an annual report of its activities and any pending matters to the Executive Committee at the June Executive Committee meeting.
5. The scope of the charges of the standing committees will be established by the A/P Faculty Senate in accordance with the bylaws.
6. Standing committees will establish goals, objectives, and priorities. They have the authority to investigate, carry out activities necessary to perform their charges, prepare reports, offer recommendations, and make parliamentary motions.
7. Standing committees may establish subcommittees to address specific issues as needed. Membership of subcommittees will consist of members of the respective standing committee. Chairs of subcommittees will be appointed by the chair of the respective standing committee.
8. Standing committee chairs will convene their committees no less frequently than once a month unless approved by the Executive Committee.
9. At the end of each term, each committee chair will provide to the respective incoming chair appropriate information to facilitate continuity (e.g., charges, goals, unfinished business, investigatory materials, past and pending parliamentary motions).

a. Policies and Issues Committee - Primary Responsibilities

1. Serves as a link between the A/P Faculty Senate and the Office of Human Resources and/or University Administration in general on personnel and related matters.
2. Brings to the A/P Faculty Senate's attention changes in policies and procedures that may affect A/P Faculty and advises the Senate on these issues. This includes monitoring the activities of the
University Council, Commissions, Advisory Councils, and Committees that may affect A/P Faculty.

3. Provides assistance to A/P Faculty in obtaining educational leave, tuition waivers, and other educational opportunities.

b. Communications Committee - Primary Responsibilities
1. Coordinates communications to employees and the university community and supports the executive committee in matters pertaining to the Board of Visitors and the Virginia State Legislature as to the mission of the A/P Faculty Senate.
2. Communicates information to A/P Faculty concerning new employee orientation, employee training and development, incentives and rewards, benefits, retirement planning, and related matters utilizing university and non-university media and/or other appropriate means as needed.
3. Interfaces with university and non-university media sources to provide information on A/P Faculty Senate activities when appropriate.
4. Fulfills communications needs of the A/P Faculty Senate as requested by the President or Executive Committee.

c. Elections and Nominations Committee - Primary Responsibilities
1. Coordinates the A/P Faculty Senate elections process. Ensures that the A/P Faculty Senate Constitution and Bylaws are followed and deadlines are observed when electing Senate members, officers, and representatives to the University Council, Commissions, Advisory Councils, and Committees.
2. Compiles a list of nominations for A/P Faculty Senate officers and representatives to the University Council, Commissions, Advisory Councils, and Committees as needed.
3. Makes recommendations to the President for the appointment of members and chairs to A/P Faculty Senate committees.
4. Monitors elections of senators managed by the Commission on Administrative and Professional Faculty Affairs and oversees votes on proposed amendments to the Constitution and Bylaws of the A/P Faculty Senate.

4. Meetings
1. Regular meetings of the A/P Faculty Senate will be held on the 3rd Wednesday of each month. Occasional conflicts to this schedule, such as University holidays or inclement weather, will be addressed by the Executive Committee.

2. The A/P Faculty Senate will invite the President of the University to meet with the Senate at least once each academic year.

3. All meetings will be open to the university community unless the A/P Faculty Senate approves a motion to enter into closed session. However, a person who is not an A/P Faculty Senate member may not participate in the discussion unless recognized by the President of the Senate.

5. Procedures
   1. A/P Faculty employees may submit items to any senator for inclusion in the agenda of the next regular A/P Faculty Senate meeting. A senator wishing to have an item (or items) included on the agenda of a regular meeting may submit the item(s) to the President of the A/P Faculty Senate. The President will then decide whether items should be included on the next regular meeting agenda or passed to the appropriate Senate committee.

6. Parliamentary Authority
   1. The parliamentary rules used by University Council, subject to special rules as may be adopted by the A/P Faculty Senate, will govern the procedures of the A/P Faculty Senate, cabinet, and standing committees.
November 29, 2020

The Faculty Senate Cabinet reviewed resources related to the Commission on Administrative and Professional Faculty Affairs (CFA) Resolution 2020-21A: Resolution to Approve the Constitution and Bylaws for the Administrative and Professional (A/P) Faculty Senate.

The Faculty Senate leadership team is supportive of CAPFA Resolution 2020-21A and has no requested amendments at this time. Looking further ahead, though, the draft constitution may require revision in response to the ongoing work of the President’s Committee on Governance. Thank you for advancing shared governance at Virginia Tech!

Respectfully,

Eric Kaufman, President
Virginia Tech Faculty Senate
Constituent Report by Undergraduate Student Representative to the Board, Ms. Camellia Pastore, will be presented at Sunday’s Information Session.
Constituent Report by Graduate Student Representative to the Board, Ms. Sabrina Sturgeon, will be presented at Sunday’s Information Session
Constituent Report by President of Staff Senate, Ms. Tamarah Smith, will be presented at Sunday’s Information Session.
Constituent Report by President of Faculty Senate, Dr. Eric Kaufman, will be presented at Sunday’s Information Session
President Sands will provide an update to the Board on Monday, March 22, 2021.
I move that the Board convene in a closed meeting, pursuant to § 2.2-3711, Code of Virginia, as amended, for the purposes of discussing:

1. Appointment of faculty to Emeritus status, the consideration of individual salaries of faculty, consideration of Endowed Professors, review of departments where specific individuals’ performance will be discussed, and consideration of personnel changes including appointments, resignations, tenure, and salary adjustments of specific employees and faculty leave approvals.

2. The status of current litigation and briefing on actual or probable litigation.

3. Fundraising activities.

4. Special awards.

all pursuant to the following subparts of 2.2-3711 (A), Code of Virginia, as amended, .1, .7, .9, and .11.
Appointment of the Nominating Committee for Officers of the Board
# Open Session Agenda

**ACADEMIC, RESEARCH AND STUDENT AFFAIRS COMMITTEE**

**Inn at Virginia Tech**  
**Monday, March 22, 2021**  
**9:00 a.m. – 11:30 a.m.**

<table>
<thead>
<tr>
<th>Agenda Item</th>
<th>Reporting Responsibility</th>
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<tbody>
<tr>
<td>1. Motion to Return to Open Session</td>
<td>G. Harris</td>
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<tr>
<td>2. Welcome and Acceptance of Agenda</td>
<td>G. Harris</td>
</tr>
<tr>
<td>3. Report of Closed Session Action Items</td>
<td>G. Harris</td>
</tr>
<tr>
<td>4. Consent Agenda</td>
<td>G. Harris</td>
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<tr>
<td>A. Approval of November 16, 2020 Minutes</td>
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<tr>
<td>B. Report of Reappointments to Endowed Chairs, Professorships, and Fellowships</td>
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<tr>
<td>*C. Resolution to Approve New Bachelor of Science in Education Degree in Elementary Education</td>
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<tr>
<td>*D. Resolution to Approve New Undergraduate Education Degree with Two Designations: Bachelor of Arts in Education Degree in Secondary Education and Bachelor of Science in Education Degree in Secondary Education</td>
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<tr>
<td>*E. Resolution to Establish a Scholarly Articles Open Access Policy</td>
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<td>7. ♦ Provost’s Update</td>
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<td>8. ♦ Student Affairs Discussion</td>
<td>F. Shushok</td>
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<td>9. Future Agenda Items</td>
<td>G. Harris</td>
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<td>10. Adjourn</td>
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* Requires Full Board Approval  
♦ Discusses Enterprise Risk Management topic(s)
## ACADEMIC, RESEARCH AND STUDENT AFFAIRS COMMITTEE

### Monday, March 22, 2021

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| 1. Motion to Return to Open Session  
The committee will vote to return to open session. | G. Harris |
| 2. Acceptance of Agenda  
Greta Harris, chair of the committee, will ask members to review and vote on acceptance of the meeting agenda including a vote on the Consent Agenda items. | G. Harris |
| 3. Report of Closed Session Action Items  
G. Harris will report on the actions taken during the committee’s Closed Session. These items will be considered during the full board’s Closed Session. | G. Harris |
| 4. Consent Agenda  
The committee will consider approval of items on the consent agenda including: November 16, 2020 minutes, a report on reappointments to endowed chairs, professorships, or fellowships, a resolution to approve a new Bachelor of Science degree in elementary education, a resolution to approve a new bachelor of arts degree in secondary education with two designations, a resolution to establish a scholarly articles open access policy, a resolution for an appointment to the Virginia Coal and Energy Research and Development Advisory Board, a resolution to revise the promotion and tenure guidelines in chapter three of the faculty handbook, a resolution to revise chapter five of the faculty handbook, a resolution to clarify probationary reappointment language in the faculty handbook, and a resolution to amend the voluntary transitional retirement program. | G. Harris |
| 5. Update: College of Liberal Arts and Human Sciences  
Laura Belmonte, dean of the College of Liberal Arts and Human Sciences (CLAHS) will offer the committee on update on the college including the various ways in which the college meets the university’s strategic goals. Presentation discussion will include college growth, diversity, equity, and inclusion, new programs and initiatives, research highlights, and the college’s response to COVID 19. | L. Belmonte |

* Requires Full Board Approval  
♦ Discusses Enterprise Risk Management topic(s)
6. **Report from the Council of College Deans**  
   *L. Belmonte*, representative from the university’s Council of College Deans will provide the committee with an update from the perspective of the college deans.

7. ◆ **Provost’s Update**  
   *C. Clarke*, executive vice president and provost, will update the committee on the university’s academic initiatives.

8. ◆ **Student Affairs Discussion**  
   *F. Shushok*, vice president for student affairs, and C. Clarke will facilitate a discussion on the ways initiatives housed within the Division of Student Affairs advance the holistic education of students. The discussion will highlight university resources available to students including residential learning communities, student leadership opportunities, and counseling services.

9. **Items for Possible Inclusion on Future Agendas**  
   *G. Harris*

10. **Adjourn**  
    *G. Harris*

* Requires Full Board Approval  
◆ Discusses Enterprise Risk Management topic(s)
## Closed Session Agenda

**ACADEMIC, RESEARCH, AND STUDENT AFFAIRS COMMITTEE**

**Inn at Virginia Tech**
**Monday, March 22, 2021**
**8:30 – 9:00 a.m.**

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<td>* 4. Resolution to Approve Appointments with Tenure (3)</td>
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<td>* 5. Resolutions to Approve Appointments to University Distinguished Professor (4)</td>
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<td>* 6. Resolution to Approve Faculty Research Leaves (65)</td>
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<td>7. Ratification of Personnel Changes Report</td>
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*Requires Full Board Approval*
**Closed Session Briefing Report**

**ACADEMIC, RESEARCH, AND STUDENT AFFAIRS COMMITTEE**

Inn at Virginia Tech  
Monday, March 22, 2021  
8:30 – 9:00 a.m.

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*Greta Harris, chair of the committee, will welcome committee members and request that a member of the committee make a motion to take the committee into closed session.*

* 2. Resolutions to Approve Appointments to Emeritus/a Status (6) C. Clarke

*The committee will consider six resolutions for appointments to emeritus or emerita status.*

* 3. Resolutions to Approve Appointments to Endowed Chairs, Professorships, or Fellowships (11) C. Clarke

*The committee will consider 11 resolutions for appointments to endowed chairs, professorships, or fellowships.*

* 4. Resolution to Approve Appointments with Tenure (3) C. Clarke

*The committee will consider a resolution to approve the tenured appointments of three faculty members.*

* 5. Resolutions to Approve Appointments to University Distinguished Professor (4) C. Clarke

*The University Distinguished Professorship (UDP) is a pre-eminent faculty rank bestowed by the university’s Board of Visitors upon members of the university faculty whose scholarly attainments have attracted national and/or international recognition. The committee will consider four resolutions for appointment to University Distinguished Professor.*

* 6. Resolution to Approve Faculty Research Leaves (65) C. Clarke

*Requires Full Board Approval*
The committee will consider a resolution to approve 65 requests for faculty research leave.

* 7. **Ratification of Personnel Changes Report**

C. Clarke

The Faculty Personnel Changes Report is considered at each board meeting by the Academic, Research, and Student Affairs Committee and the Finance and Resource Management Committee. The report includes new faculty appointments and adjustments in salaries for faculty through the quarter ending December 31, 2020.
MOTION TO RETURN TO OPEN SESSION

WHEREAS, the Academic, Research, and Student Affairs of the Board of Visitors of Virginia Polytechnic Institute and State University has convened in closed session on this date pursuant to an affirmative recorded vote and in accordance with the provision of The Virginia Freedom of Information Act; and

WHEREAS, Section 2.2-3712 of the Code of Virginia requires a certification by the Academic, Research, and Student Affairs Committee of the Board of Visitors that such closed session was conducted in conformity with Virginia law;

NOW, THEREFORE BE IT RESOLVED, that the Academic, Research, and Student Affairs Committee of the Board of Visitors of Virginia Polytechnic Institute and State University hereby certifies that, to the best of each member’s knowledge,

(i) only public business matters lawfully exempted from open session requirements by Virginia law were discussed in the closed session to which this certification resolution applies, and

(ii) only such public business matters as were identified in the motion by which the closed meeting was convened were heard, discussed or considered by the Academic, Research, and Student Affairs Committee of the Board of Visitors.
Acceptance of Agenda

ACADEMIC, RESEARCH, AND STUDENT AFFAIRS COMMITTEE

The chair of the committee will review and ask for acceptance of the Open Session Agenda and items as listed on the Open Session Consent Agenda.
A. Approval of November 16, 2020 Meeting Minutes
B. Report of Reappointments to Endowed Chairs, Professorships, and Fellowships
*C. Resolution to Approve New Bachelor of Science in Education Degree in Elementary Education
   Resolution to Approve New Undergraduate Education Degree with Two Designations: Bachelor of Arts in Education Degree in Secondary Education and Bachelor of Science in Education Degree in Secondary Education
*D. Resolution to Approve New Undergraduate Education Degree with Two Designations: Bachelor of Arts in Education Degree in Secondary Education and Bachelor of Science in Education Degree in Secondary Education
*E. Resolution to Establish a Scholarly Articles Open Access Policy
*F. Resolution to Approve Appointment to the Virginia Coal and Energy Research and Development Advisory Board
*G. Resolution to Revise Faculty Handbook Promotion and Tenure Guidelines
*H. Resolution to Revise Chapter Five of the Faculty Handbook: Employment Policies for Non-Tenure Track Instructional Faculty
*I. Resolution to Clarify Probationary Reappointment Language in the Faculty Handbook
*J. Resolution to Amend Virginia Tech’s Voluntary Transitional Retirement Program for Tenured Faculty (University Policy 4410)

* Requires Full Board Approval
Committee Members Present:
Greta Harris (chair), Melissa Nelson, Carrie Chenery, Jeff Veatch (electronically).
Eric Kaufman, (faculty representative), Tamarah Smith (staff representative).

Guests:
Laura Belmonte, Cyril Clarke, Karen DePauw, Corey Earles, Juan Espinoza,
Jack Finney, Rachel Gabriele, Henri Gendreau, Matthew Hulver, X.J. Meng, Ellen
Plummer, Judy Taylor, Paul Winistorfer.

OPEN SESSION

1. Motion to Return to Open Session.
The committee voted unanimously to move into Open Session.

2. Welcome and Acceptance of Agenda. Greta Harris, chair of the committee,
welcomed committee members and attendees to the Open Session.
The committee voted unanimously to accept the agenda as presented
including all items on the Consent Agenda.

3. Report of Closed Session Action Items. G. Harris reported that the committee met
in closed session and approved 10 faculty appointments to emeritus/emerita status,
seven appointments to endowed chairs, professorships, or fellowships, one tenure
appointment, and ratified the Personnel Changes Report.

Reappointments to Endowed Chairs, Professorships, and Fellowships. Resolution to
Revise Graduate Honor System Constitution. Pratt Fund Overview. Resolution for
Approval of Reappointments to the Virginia Coal and Energy Research and
Development Advisory Board. Resolution for Exclusion of Certain Officers/Directors.

5. Update: College of Natural Resources and Environment. Paul Winistorfer, dean
of the college, offered the committee an overview of the progress and
accomplishments of the college. In addition to programs on the Blacksburg campus,
the college’s Center for Leadership in Global Sustainability is located in the greater
Washington, D.C. metro area. The college is ranked first of its kind in the U.S., and
nationally ranked academic programs include forestry and packaging. The college is
competitive in several areas including offering unique degree programs, a robust and
dedicated advising center, and outreach efforts to employers. Future goals include
advancing the college’s presence in the greater Washington D.C. metro area,
engaging with the growing Innovation Campus, and growing research expenditures.
6. **Council of College Deans Update.** Council of College Deans Update. Laura Belmonte, dean of the College of Liberal Arts and Human Sciences (CLAHS) representing the Council of College Deans, reported to the committee on several items. The colleges continue to manage and respond to the additional stress on instruction, research, and promotion and tenure processes due to the pandemic. Deans are monitoring the impact of a new administration in Washington, D.C. on federal and state budgetary and policy decisions. Hiring of faculty is impacted by budget cuts and identifying essential hires for instruction and academic support. Colleges and faculty are planning for spring semester instruction and hoping to offer increased face-to-face learning. The deans are requesting that faculty and student support efforts include as many live interactions as is safe and possible. Transdisciplinary learning and discovery is a priority for all colleges. For example, the College of Liberal Arts and Human Sciences is establishing an Academy of Transdisciplinary Studies along with interdisciplinary, cross-college minors. Deans are collaborating to provide forums in which current issues are discussed. For example, CLAHS co-sponsored with the College of Science on a forum called “Living with a Pandemic.”

The College of Science has established an Academy of Data Science built upon the college’s successful model of the Academy of Integrated Science. The college is establishing collaborations for transdisciplinary work in the science of data science and data science applied to science. Within the college, the departments of math and statistics are working together on an M.S. degree in data science. The college is raising philanthropic funds to support faculty fellows.

The Virginia Tech Carilion School of Medicine (VTCSOM) increased its class size from 42 and, in July 2020, admitted 49 students. The VTCSOM launched a curricular domain called Health Systems Science and Interprofessional Practice. Clinical training resumed in July 2020 and students are on track to meet curricular requirements through a combination of in-person and virtual learning experiences. Applications for the incoming class currently exceed 6,000, which is 30% higher than the VTCSOM’s previous record.

The committee asked questions and discussed the benefits and challenges associated with requiring student attendance and the use of cameras in on-line instruction. Elements of instruction from which the university has learned this year include that students like having on-line options, teleworking for faculty and staff seems to improve productivity for some, caregiving remains a challenge for many faculty, and using zoom for guest speakers helps manage speaker costs and can draw a larger audience than what would be possible in person.

7. **Provost’s Update and Discussion.** Cyril Clarke, executive vice president and provost, provided information on several items. Spring semester planning is occurring within a three-fold commitment to mitigating health safety, sustaining academic quality, and accomplishing this within the university’s resource capacity.
The spring semester schedule has been announced and maintains previously established start and end dates. The semester will begin with online instruction as move-in of residential students is completed at which time in-person instruction will begin. The initial overlap of online instruction with move-in is intended to engage students and discourage social congregating that lead to a spike in infection in the fall. There will be no extended spring break. To provide students with downtime and stress relief during the spring semester, there will be five, one-day breaks distributed across the semester in which classes will not be held. Plans for spring semester align with public health advice to avoid congregating social settings.

Spring semester instruction will continue the mode of delivery used over the fall semester. Final decisions rest with faculty, in consultation with department heads, for whether courses are in-person, online, or in a hybrid format. Faculty members have been encouraged to consider ways in which to increase in-person learning while maintaining the university’s commitment to mitigating health safety. Synchronous delivery is encouraged for on-line instruction. In-person instruction contributes to student wellness and positive experiences of academic quality. Approximately 30% of courses are being delivered either in-person or hybrid. The window for requesting spring classes closed on November 10 and indicate a positive trend. Residential housing contracts, including cancellations, are stable and an 85% occupancy rate is anticipated.

Undergraduate admissions applications are up. The university is committed to maintaining a 30,000 person cap on undergraduate enrollment. In addition, the university is committed to increasing out of state student, underserved, and minority student enrollments. The university is using robust modeling to manage and forecast enrollments. Undergraduate applications are down nationally, however, Virginia Tech’s applications are up 30% and the university is experiencing increases in applications from students who are out of state, international, African American, Latinx, and first-generation. Using the common application assists in reducing has improved the university’s draw of applications.

In graduate education, the provost’s graduate education task force released its report and recommendations. Fourteen recommendations are summarized in four areas:

- Acquisition of extramural funding necessary to grow enrollment
- Employment conditions for graduate students, including salary, considering not charging tuition after completion of non-research coursework, the duration of support over the years of a student’s graduate career, and improved mentorship and professional development
- Assessing outcomes of graduate education
- Ways in which colleges can improve their involvement in graduate student admissions and in graduate student goals and strategies

Provost Clarke thanked Dr. Karen DePauw for her outstanding service and contributions to strengthening and leading the university’s graduate education
programs and initiatives. The committee congratulated Dr. DePauw on her 
retirement and thanked her for her many years of service to the university and her 
advocacy for graduate students.

Provost Clarke introduced Dr. Daniel Sui as the vice president for research and innovation.

8. Transdisciplinary Learning and Discovery. X. J. Meng, University Distinguished 
Professor from the Virginia-Maryland College of Veterinary Medicine, reported on 
establishing a new center, the Center for Emerging, Zoonotic, and Arthropod-borne 
Pathogens, which will address many issues of relevance to the current pandemic 
along with basic immunological sciences. The new center has been supported by 
the Fralin Life Sciences Institute.

Matthew Hulver, Professor from the College of Agriculture and Life Sciences and 
Executive Director of the Fralin Life Sciences Institute (FLSI), described ways in 
which a large, well-funded and well-staffed institute can move life science research 
forward. Investments in research programs by the FLSI will be on large problems 
facing the nation and world. FLSI will provide experiential learning opportunities for 
undergraduates, professional opportunities for graduate students, and facilitate 
partnerships with the FLSI and relevant academic colleges. FLSI as an investment 
institute does not take overhead from grants, allowing colleges to use those funds 
to grow their research programs. The major focus is on environment and health 
interactions and major “wicked” problems.

Three goals for FLSI: (1) Paradigm-shifting science: the most critical issues facing 
society; (2) Next leaders: developing graduate students as the next generation of 
scientific leaders and provide education for undergraduates to pursue graduate 
training; and (3) Impacting communities: basic discovery and translational science 
to positively affect communities.

The committee discussed the exciting work represented in these efforts and the 
opportunities for seeking large impactful grants to address the top life sciences 
problems facing society.

9. Agenda Items for March 2020 meeting. The chair asked for topics for the 
committee’s agenda. Ideas include an update from University Libraries, discussion 
on the university’s involvement in economic development, updates on wellbeing and 
mental health of the university community including student athletes.

10. Adjourn. Having no further business, the committee adjourned at 11:55.
The president and executive vice president and provost have confirmed the reappointment of the following faculty to endowed chair, professorship, or fellowship appointments with a salary and/or operating supplement provided by the endowment and, if available, with funds from the eminent scholars match program.

**College of Engineering (7)**

Doug Bowman  
Frank Maher Professorship

Luke Lester  
Roanoke Electric Steel Professorship

Chang Lu  
Fred W. Bull Professorship in Chemical Engineering

Amy Pruden  
W. Thomas Rice Professorship

Padma Rajagopalan  
Robert E. Hord Jr. Professorship in Chemical Engineering

Danfeng (Daphne) Yao  
Elizabeth and James E. Turner Jr. '56 Faculty Fellowship

Chenming (Mike) Zhang  
Elizabeth and James E. Turner Jr. Faculty Fellowship

**College of Science (1)**

Cayelan Carey  
Roger Moore and Mojdeh Khatam-Moore Faculty Fellowship
RESOLUTION TO APPROVE NEW BACHELOR OF SCIENCE IN EDUCATION (B.S.Ed.) IN ELEMENTARY EDUCATION (PK-6)

WHEREAS, Virginia’s Pre-school through 12th grade (PK-12) schools began the 2016-2017 school year with more than 1000 teacher vacancies; and

WHEREAS, there is a documented shortage of qualified PK-12 teachers nationally and within the Commonwealth of Virginia; and

WHEREAS, Governor McAuliffe signed an executive order in December 2017 directing the state’s education board to adopt emergency rules to again allow colleges to offer four-year undergraduate degrees in teaching; and

WHEREAS, according to the 2020-2021 Ten Critical Shortage Teaching Endorsement Areas in Virginia provided by the Commonwealth, elementary education is the second most in-need licensure area, only behind special education; and

WHEREAS, Virginia Tech’s School of Education (SOE) in the College of Liberal Arts and Human Sciences (CLAHS) is committed to providing coursework and experiential learning fitting the VT-shaped curriculum to produce licensable graduates with the knowledge, skills, and dispositions of highly qualified PK-12 educators thereby addressing the noted state teacher vacancies; and

WHEREAS, no new resources will be required to initiate this new Bachelor of Science in Education (B.S.Ed.) in elementary education (PK-6) due to redeveloping existing courses and utilizing current undergraduate initiatives to the maximum extent possible; and

WHEREAS, letters of support have been received from all departments whose courses SOE students would take; and

WHEREAS, the Bachelor of Science in Education in elementary education (PK-6) would be an identifiable curriculum with a major in elementary education and a requirement that students pass required state licensure exams that clearly signal the expertise and career focus of educator preparation; and

WHEREAS, the Bachelor of Science in Education in elementary education (PK-6) is anticipated to initially attract 25-30 additional students per year interested in pursuing careers in PK-6 teaching to Virginia Tech;

NOW, THEREFORE, BE IT RESOLVED that the new Bachelor of Science in Education degree in elementary education (PK-6) be approved effective fall 2021 and the proposal forwarded to the State Council of Higher Education for Virginia (SCHEV) for approval and to the Southern Association of Colleges and Schools (SACS) for notification.

RECOMMENDATION:

That the Board of Visitors approve this resolution to establish a new Bachelor of Science in Education degree in elementary education (PK-6).

March 22, 2021
Proposal for New Degrees in Education

Justification:

Teacher Shortage

There is a current documented shortage of qualified PK-12 teachers both nationally and within the Commonwealth of Virginia. According to data from the Virginia Department of Education, the number of unfilled teaching positions in the state nearly doubled between the 2013-2014 and 2017-2018 school years causing Virginia schools to begin the 2016-2017 school year with more than 1000 teacher vacancies. In response, former Gov. Terry McAuliffe signed an executive order in December of 2017 directing the state education board to adopt emergency rules to allow colleges to again offer four-year undergraduate degrees in teaching. In 2018 the General Assembly introduced and passed, among additional changes to the teaching licensure process, legislation permitting colleges and universities to create these programs. Students can now become fully-licensed teachers after earning a four-year undergraduate degree in education.

By October of 2019, the State Council of Higher Education for Virginia approved new programs at fifteen public colleges and universities in the state. Our community partners, including Montgomery County Public Schools, have also indicated a local need for more properly licensed and qualified teachers, while undergraduate admissions recruiters have reported that high-school students are often confused about how to become a PK-12 teacher at Virginia Tech. As other colleges and universities in Virginia begin offering undergraduate licensure, Virginia Tech School of Education will need to offer comparable opportunities in order maintain current enrollment and attract new students.

Critical Shortage Areas

While there are teacher vacancies of all types across the state, there are specific licensure areas that have especially prevalent shortages. The Virginia Department of Education discloses annually, a list of ten Critical Teaching Shortage Areas to the General Assembly based on vacancies and/or a documented lack of qualified applicants for positions. Elementary Education has been near the top of this list since the 2010-2011 school year. Secondary Math and Career and Technical Education have also been in the top half for the same period. Secondary English Language Arts has been included each year and History & Social Sciences has ranked recently, as well.

Because preparation is a key factor influencing teacher recruitment and retention, Virginia Tech School of Education has an opportunity to produce capable educators and
reduce some of these shortages. Offering licensure through undergraduate majors will streamline requirements and lower the overall cost of entering the profession, while still preparing highly qualified teachers for the Commonwealth of Virginia.

**Job Market Information**

According to the Virginia Employment Commission, both Elementary and Secondary School Teacher are considered high-growth occupations for individuals holding bachelor’s degrees. The number of Elementary School Teacher positions are expected to increase by almost 4000 while Secondary positions close to 3000. The Bureau of Labor Statistics projects a national growth of 3% for Kindergarten and Elementary School Teachers and 4% for High School Teachers over the next 10 years.

**Strategic Plan:**

Since fall 2018, faculty and staff in the School of Education have met with (and continue to meet with) representatives from the Virginia Department of Education and State Council of Higher Education for Virginia to determine how new regulations will affect our programs. We have also consulted with teacher preparation programs at other colleges and universities regarding their plans for transitioning to undergraduate programs.

The School of Education faculty and staff met as a group in spring 2019 to plan how our new programs would operate and collaborated with impacted departments to determine how we could build programs that would provide appropriate knowledge, skills, and dispositions for future educators while preserving the key student-centered elements of an undergraduate program. Our Science and Music Education programs will remain at the graduate level while Elementary, English Language Arts, History and Social Sciences, Mathematics, and Career and Technical Education programs will transition to undergraduate licensure.

We continue to work with appropriate departments on campus as well as our SCHEV representative and the VDOE to create high-quality undergraduate teacher preparation programs. We have met with the First Year Experience office to plan for students who will have different developmental needs than those we currently serve in our graduate programs and will continue to build relationships with high-school and community college teacher education programs that support students before they enter formal approved licensure programs.

The proposed degrees and majors will be housed in the School of Education within the College of Liberal Arts and Human Sciences. We are proposing two degrees, B.S.Ed. in Elementary Education and B.A.Ed./B.S.Ed. in Secondary Education, based on available CIP codes, the differences in core competencies for licensure established by the Virginia Department of Education, and professional educator standards recognized by the Virginia Tech School of Education.

B.S.Ed. in Elementary Education will contain the Elementary Education PK-6 major with licensure. The content covered in this major is intentionally planned to cover specific
material and practical aspects of teaching young children without much room for deviation. The Elementary Education major includes an emphasis on STEM as well as literacy.

The B.A.Ed./B.S.Ed. in Secondary Education will contain majors where licensure involves students in 6th-12th grade. While the foundational education courses are the same for all majors in Secondary Education, the specific coursework of each licensure area is unique requiring multiple majors. Both B.A.Ed. and B.S.Ed. are included as options within Secondary Education because the individual teaching areas have different professional expectations which are reflected in the required courses.

The graduation checksheets for English Language Arts and History and Social Sciences include a broader array of courses within the subject area allowing students to customize their education based on individual interests. Administrators hiring teachers in these licensure areas expect students to earn a B.A.Ed. and possess individualized specialties. Mathematics and Career and Technical Education requirements, on the other hand, are very scripted to cover the specific fundamental standards of the content area. Administrators hiring in these areas would expect all licensed teachers be proficient in the same content and possess a B.S.Ed. in Secondary Education.

The first students will be able to enroll fall of 2021 and those who are able to transfer into the major could possibly graduate in spring 2023, provided they have taken the appropriate courses. During the transition, any student who would not be able to transfer into and complete the undergraduate degree in 4 years would be allowed to continue through the 5th-year master’s program as it is currently established. A transition is expected by spring 2024. Subsequently, a revised master’s program will be developed for licensed, practicing teachers to further their professional competences.

**Students Served:**

Our new education majors will serve the same audience as the graduate licensure programs with the primary purpose being to reduce the financial barrier of a 5th year of college while still producing teachers who are strong in pedagogy and content knowledge.

Between 2014 and 2019, an average of 231 incoming freshmen indicated an interest in teaching on their Virginia Tech admission applications. In 2019, of those freshmen, 35 declared *Pre-Education and Human Sciences, Undecided* as their first-choice major. While *PreEd Undecided* is not a degree-granting major, most of these students will progress to our licensure programs by way of related undergraduate degrees.

The Pre-Education Advising Program (PEAP) currently serves between 300 and 400 students, in multiple majors. PEAP is a part of the School of Education and supports undergraduate students from all majors in moving toward the goal of becoming
competitive applicants and highly qualified educators. Participating students benefit from: advising sessions on specific requirements for state endorsements and graduate school admissions, field experiences in local schools, teacher assessment preparation, professional development workshops, and leadership opportunities in pre-professional student organizations. Not all students who participate will apply to our graduate program.

There are several reasons that pre-education students choose to not continue with graduate school, including: cost, desire to move closer to home, difficulty with prerequisites, the classroom was not what they expected, and alternate licensure opportunities. Each year, graduate licensure programs in the VT School of Education produce 100-150 licensed PK-12 educators. Over the past 5 years, Elementary Education has averaged 25 students per year, while Math, English, Social Studies and CTE (combined into the category of Secondary Education) have averaged around 30.

In the short-term, we anticipate the number of incoming freshmen to mirror what currently applies to the graduate program 25-35 students per degree (not per major). We expect that number to double within the first two years and cap at 75-100 incoming freshmen. Of those, we anticipate 85-90% will complete the degree. We expect to maintain 250-350 undergraduate students in each degree program (elementary and secondary).

For students who do not complete the teacher licensure requirements but still earn the education degree, there are related career opportunities in the field, such as: teaching in private schools or online programs, hospitals providing educational services for long-term school-aged patients, professional tutoring, designing curriculum for textbook companies, developing exams for testing agencies, or working in educational outreach programs for museums/parks or agencies providing professional development to PK-12 teachers. Students who qualify may also apply to one of our graduate programs.

Benefits to Students

Undergraduate education degrees allow a route to licensure without the added expense and time of graduate school. Having clearly visible education majors will allow high-school students, who are specifically interested in teaching, to imagine themselves at Virginia Tech. High-school and community college students who are participating in future educator programs will be able to readily transition into our undergraduate majors instead of going through other programs to be eligible for graduate study. Undergraduate programs also allow more graduates to obtain a full teaching license upon completion of their bachelor’s program.

Undergraduate programs create more opportunities for students to learn their content within the context of teaching it, creating stronger connections between pedagogy and content knowledge. The increased length of time prospective teacher candidates will spend in the program will allow us to properly scaffold their learning and provide valuable feedback throughout the degree. It will also provide students opportunities to
meaningfully reflect on their coursework and teaching experiences as they develop essential educator dispositions.

Finally, offering formal education majors will encourage a sense of belongingness and professional identity among future educators. Sense of belonging and its impact on student success has been well documented in higher education research. A college students’ sense of belonging is related to several things, including engagement and retention, motivation, and academic performance. Equally important to education students, is the development of a professional teacher identity. This identity promotes effectiveness and well-being and is developed, in-part, through interactions with peers during shared pre-professional experiences.

Benefits to Community

Maintaining the quality of our program while reducing financial barriers and expediting the licensure process advances the teaching profession, as well. Under certain circumstances, an individual with a bachelor’s degree can obtain provisional licensure and teach in PK-12 settings without any formal training in the classroom. Research shows that alternatively licensed teachers, such as these, leave the profession at a much high rate than those who have finished an approved educator preparation program and we know that teacher turnover leads to significant recruitment and training costs for school systems while negatively impacting student achievement and overall teacher effectiveness. Providing teaching candidates with proper preparation and earlier and more frequent opportunities in classrooms will reduce this type of teacher attrition.

Resources Needed:

The graduation checksheets for education majors are comprised mostly of redesigned courses within the existing master’s program including previously required content courses. A few new courses were developed to offer additional scaffolding opportunities (such as field study and first year experience) and foundational material. By redeveloping existing courses and utilizing current undergraduate initiatives to the maximum extent possible, no new resources will be required to implement this new major at this time.

Program Requirements:

In addition to the enclosed graduation checksheet, students who are planning to become licensed will need to meet requirements set forth by the Virginia Department of Education including professional licensure examinations and certifications.
GRADUATION REQUIREMENTS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

Credits and GPA – Completion of a minimum of 120 credits with a minimum overall GPA of 2.5; and in-major GPA of 3.0. (In major GPA includes all EDCI and EDEP courses)

Prerequisites: Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Additional Requirements – Students must submit passing scores on required state licensure examinations.

SATISFACTORY PROGRESS TOWARD DEGREE

University Policy 91 requires a student to make satisfactory progress towards a degree. Additionally, licensure programs require that by the time a student has completed 72 credits, they must have passed all licensure examinations, carry an in-major GPA of 3.0, and be accepted into the educator preparation program.

PATHWAYS TO GENERAL EDUCATION (42 CREDITS)

*unless otherwise indicated, all courses taken to satisfy Pathways General Education must be taken on an A-F basis

Concept 1: Discourse (9 credits)

1F - Foundational

_____ ENGL 1105 First-Year Writing (3 credits)
_____ ENGL 1106 First-Year Writing (3 credits)

1A - Advanced/Applied

_____ (3 credits)

Concept 2: Critical Thinking in the Humanities (6 credits)

_____ HIST 1115 History of the United States (3 credits; also meets Concept 7 requirement)
_____ HIST 1116 History of the United States (3 credits)

Concept 3: Reasoning in the Social Sciences (6 credits)

_____ GEOG 1014 World Regions (3 credits)
_____ HD 1004 Human Development I (3 credits) or PSYC 2034 Developmental Psychology (3 credits)

Concept 4: Reasoning in the Natural Sciences (6 credits)

_____ BIOL 1014 Introduction to Biology (3 credits)
_____ GEOS 1004 Earth Science: Our Past, Present, and Future (3 credits)

Concept 5: Quantitative and Computational Thinking (9 credits)

5f - Foundational

_____ (3 credits)
_____ (3 credits)

1 https://policies.vt.edu/91-eligibility-for-continued-enrollment.pdf
2 Pre: PSYC 1004 Introduction to Psychology
5a - Advanced/Applied
   ____ EDCI 4244 Curriculum & Instruction in Middle School Mathematics (4-8)³ (3 credits)

Concept 6: Critique and Practice in Design and the Arts (6 Credits)

6d - Design
   ____ 3 credits

6a - Arts
   ____ 3 credits

Concept 7: Critical Analysis of Identity and Equity in the United States (3 credits)
   ____ HIST 1115 History of the United States (3 credits; also meets Concept 2 requirement)

BACHELOR OF SCIENCE IN EDUCATION IN ELEMENTARY EDUCATION COMMON DEGREE CORE REQUIREMENTS⁴
(22 CREDITS)
   ____ EDCI 1004 Professional Dispositions in Elementary Education (3 credits)
   ____ EDCI 2574 Social Foundations of Education (3 credits)
   ____ EDCI 3234 Foundations of Reading Instruction (PK-6) (3 credits)
   ____ EDCI 3244 Curriculum & Instruction in Elementary Mathematics, PK-3 (3 credits)
   ____ EDCI 3334 Teaching Language Arts in the Elementary Classroom (4 credits)
   ____ EDCI 4554 Educating Exceptional Learners⁵ (3 credits)
   ____ EDEP 2374 Educational Psychology for PK-12 Teachers (3 credits)

MAJOR IN ELEMENTARY EDUCATION WITH LICENSURE REQUIREMENTS (42 CREDITS)
   ____ EDCI 3074 Elementary Curriculum: Methods in Teaching⁶ (3 credits)
   ____ EDCI 3254 Elementary Methods in Science (3 credits)
   ____ EDCI 3354 STEM in Elementary Schools⁷ (3 credits)
   ____ EDCI 3464 Elementary Social Studies Teaching Methods (3 credits)
   ____ EDCI 3474 Assessment & Diagnosis in Elementary Mathematics Classroom (3 credits)
   ____ EDCI 4074 Culturally Responsive Teaching in the Elementary Classroom⁸ (3 credits)
   ____ MATH 1614 Numbers and Operations for Teachers (3 credits)
   ____ MATH 1624 Geometry for Teachers (3 credits)

Elementary Teaching Practicum:
   ____ EDCI 2004 Discovering the Elementary Classroom: Field Studies in Pre-Education (3 credits)
   ____ EDCI 3964 Field Work/Practicum (6 credits)
   ____ EDCI 4964 Field Work/Practicum (9 credits)

FREE ELECTIVE COURSES (14 CREDITS)

120 TOTAL Credits

³ Pre: MATH 1614, MATH 1624, EDCI 3244
⁴ Unless otherwise indicated, all courses must be taken on an A-F basis; courses satisfying degree core requirements may not be double counted to satisfy other areas of a degree.
⁵ Pre: Junior Standing
⁶ Co: 3964
⁷ Pre: 3254
⁸ Co: 4964
RESOLUTION TO APPROVE NEW UNDERGRADUATE DEGREE 
WITH TWO DESIGNATIONS: 
BACHELOR OF ARTS IN EDUCATION (B.A.Ed.) IN SECONDARY EDUCATION AND BACHELOR OF SCIENCE IN EDUCATION (BS.Ed.) IN SECONDARY EDUCATION

WHEREAS, Virginia’s pre-school through 12th grade (PK-12) schools began the 2016-2017 school year with more than 1000 teacher vacancies; and

WHEREAS, there is a documented shortage of qualified PK-12 teachers nationally and within the Commonwealth of Virginia; and

WHEREAS, Governor McAuliffe signed an executive order in December 2017 directing the state’s education board to adopt emergency rules to again allow colleges to offer four-year undergraduate degrees in teaching; and

WHEREAS, according to the 2020-2021 Ten Critical Shortage Teaching Endorsement Areas in Virginia provided by the Commonwealth, the following endorsement areas are included: Mathematics #4, Career and Technical #5, English #8, and History and Social Sciences #10; and

WHEREAS, the School of Education (SOE) in the College of Liberal Arts and Human Sciences (CLAHS) is committed to providing coursework and experiential learning fitting the VT-shaped curriculum to produce licensable graduates with the knowledge, skills, and dispositions of highly qualified PK-12 educators thereby addressing the noted state teacher vacancies; and

WHEREAS, no new resources will be required to initiate the new bachelor’s degree due to redeveloping existing educator preparation courses and utilizing current undergraduate initiatives to the maximum extent possible; and

WHEREAS, the new degree will include two designations: 1) the Bachelor of Arts in Education (B.A.Ed.) in secondary education with endorsement areas in English language arts education, and history and social sciences education, and 2) the Bachelor of Science in Education (B.S. Ed.) in secondary education with endorsement areas in mathematics education and career and technical education areas of agricultural education, business and information technology education, family and consumer sciences education, and marketing education; and

WHEREAS, letters of support have been received from all departments whose courses SOE students would take; and

WHEREAS, the Bachelor of Arts in Education in secondary education and the Bachelor of Science in Education in secondary education with a variety of majors and a requirement that students pass required state licensure exams would be an identifiable curriculum that clearly signal the expertise and career focus of educator preparation; and

WHEREAS, the new degree program with the designations of B.A.Ed. and B.S.Ed. are anticipated to initially attract 30-40 additional students per year interested in pursuing careers in 6th-12th grade teaching to Virginia Tech;

NOW, THEREFORE, BE IT RESOLVED, that the new degree with two designations: Bachelor of Arts in Education in secondary education and Bachelor of Science in Education in secondary education be approved effective fall 2021 and that the proposal be forwarded to the State Council of Higher Education for Virginia (SCHEV) for approval and to the Southern Association of Colleges and Schools (SACS) for notification.

RECOMMENDATION:

That the Board of Visitors approve this resolution to establish this new undergraduate degree.

March 22, 2021
Proposal for New Degrees in Education

Justification:

Teacher Shortage

There is a current documented shortage of qualified PK-12 teachers both nationally and within the Commonwealth of Virginia. According to data from the Virginia Department of Education, the number of unfilled teaching positions in the state nearly doubled between the 2013-2014 and 2017-2018 school years causing Virginia schools to begin the 2016-2017 school year with more than 1000 teacher vacancies. In response, former Gov. Terry McAuliffe signed an executive order in December of 2017 directing the state education board to adopt emergency rules to allow colleges to again offer four-year undergraduate degrees in teaching. In 2018 the General Assembly introduced and passed, among additional changes to the teaching licensure process, legislation permitting colleges and universities to create these programs. Students can now become fully-licensed teachers after earning a four-year undergraduate degree in education.

By October of 2019, the State Council of Higher Education for Virginia approved new programs at fifteen public colleges and universities in the state. Our community partners, including Montgomery County Public Schools, have also indicated a local need for more properly licensed and qualified teachers, while undergraduate admissions recruiters have reported that high-school students are often confused about how to become a PK-12 teacher at Virginia Tech. As other colleges and universities in Virginia begin offering undergraduate licensure, Virginia Tech School of Education will need to offer comparable opportunities in order maintain current enrollment and attract new students.

Critical Shortage Areas

While there are teacher vacancies of all types across the state, there are specific licensure areas that have especially prevalent shortages. The Virginia Department of Education discloses annually, a list of ten Critical Teaching Shortage Areas to the General Assembly based on vacancies and/or a documented lack of qualified applicants for positions. Elementary Education has been near the top of this list since the 2010-2011 school year. Secondary Math and Career and Technical Education have also been in the top half for the same period. Secondary English Language Arts has been included each year and History & Social Sciences has ranked recently, as well.

Because preparation is a key factor influencing teacher recruitment and retention, Virginia Tech School of Education has an opportunity to produce capable educators and
reduce some of these shortages. Offering licensure through undergraduate majors will streamline requirements and lower the overall cost of entering the profession, while still preparing highly qualified teachers for the Commonwealth of Virginia.

Job Market Information

According to the Virginia Employment Commission, both Elementary and Secondary School Teacher are considered high-growth occupations for individuals holding bachelor’s degrees. The number of Elementary School Teacher positions are expected to increase by almost 4000 while Secondary positions close to 3000. The Bureau of Labor Statistics projects a national growth of 3% for Kindergarten and Elementary School Teachers and 4% for High School Teachers over the next 10 years.

Strategic Plan:

Since fall 2018, faculty and staff in the School of Education have met with (and continue to meet with) representatives from the Virginia Department of Education and State Council of Higher Education for Virginia to determine how new regulations will affect our programs. We have also consulted with teacher preparation programs at other colleges and universities regarding their plans for transitioning to undergraduate programs.

The School of Education faculty and staff met as a group in spring 2019 to plan how our new programs would operate and collaborated with impacted departments to determine how we could build programs that would provide appropriate knowledge, skills, and dispositions for future educators while preserving the key student-centered elements of an undergraduate program. Our Science and Music Education programs will remain at the graduate level while Elementary, English Language Arts, History and Social Sciences, Mathematics, and Career and Technical Education programs will transition to undergraduate licensure.

We continue to work with appropriate departments on campus as well as our SCHEV representative and the VDOE to create high-quality undergraduate teacher preparation programs. We have met with the First Year Experience office to plan for students who will have different developmental needs than those we currently serve in our graduate programs and will continue to build relationships with high-school and community college teacher education programs that support students before they enter formal approved licensure programs.

The proposed degrees and majors will be housed in the School of Education within the College of Liberal Arts and Human Sciences. We are proposing two degrees, B.S.Ed. in Elementary Education and B.A.Ed./B.S.Ed. in Secondary Education, based on available CIP codes, the differences in core competencies for licensure established by the Virginia Department of Education, and professional educator standards recognized by the Virginia Tech School of Education.

B.S.Ed. in Elementary Education will contain the Elementary Education PK-6 major with licensure. The content covered in this major is intentionally planned to cover specific
material and practical aspects of teaching young children without much room for deviation. The Elementary Education major includes an emphasis on STEM as well as literacy.

The B.A.Ed./B.S.Ed. in Secondary Education will contain majors where licensure involves students in 6th-12th grade. While the foundational education courses are the same for all majors in Secondary Education, the specific coursework of each licensure area is unique requiring multiple majors. Both B.A.Ed. and B.S.Ed. are included as options within Secondary Education because the individual teaching areas have different professional expectations which are reflected in the required courses.

The graduation checksheets for English Language Arts and History and Social Sciences include a broader array of courses within the subject area allowing students to customize their education based on individual interests. Administrators hiring teachers in these licensure areas expect students to earn a B.A.Ed. and possess individualized specialties. Mathematics and Career and Technical Education requirements, on the other hand, are very scripted to cover the specific fundamental standards of the content area. Administrators hiring in these areas would expect all licensed teachers be proficient in the same content and possess a B.S.Ed. in Secondary Education.

The first students will be able to enroll fall of 2021 and those who are able to transfer into the major could possibly graduate in spring 2023, provided they have taken the appropriate courses. During the transition, any student who would not be able to transfer into and complete the undergraduate degree in 4 years would be allowed to continue through the 5th-year master’s program as it is currently established. A transition is expected by spring 2024. Subsequently, a revised master’s program will be developed for licensed, practicing teachers to further their professional competences.

**Students Served:**

Our new education majors will serve the same audience as the graduate licensure programs with the primary purpose being to reduce the financial barrier of a 5th year of college while still producing teachers who are strong in pedagogy and content knowledge.

Between 2014 and 2019, an average of 231 incoming freshmen indicated an interest in teaching on their Virginia Tech admission applications. In 2019, of those freshmen, 35 declared Pre-Education and Human Sciences, Undecided as their first-choice major. While PreEd Undecided is not a degree-granting major, most of these students will progress to our licensure programs by way of related undergraduate degrees.

The Pre-Education Advising Program (PEAP) currently serves between 300 and 400 students, in multiple majors. PEAP is a part of the School of Education and supports undergraduate students from all majors in moving toward the goal of becoming
competitive applicants and highly qualified educators. Participating students benefit from; advising sessions on specific requirements for state endorsements and graduate school admissions, field experiences in local schools, teacher assessment preparation, professional development workshops, and leadership opportunities in pre-professional student organizations. Not all students who participate will apply to our graduate program.

There are several reasons that pre-education students choose to not continue with graduate school, including: cost, desire to move closer to home, difficulty with prerequisites, the classroom was not what they expected, and alternate licensure opportunities. Each year, graduate licensure programs in the VT School of Education produce 100-150 licensed PK-12 educators. Over the past 5 years, Elementary Education has averaged 25 students per year, while Math, English, Social Studies and CTE (combined into the category of Secondary Education) have averaged around 30.

In the short-term, we anticipate the number of incoming freshmen to mirror what currently applies to the graduate program 25-35 students per degree (not per major). We expect that number to double within the first two years and cap at 75-100 incoming freshmen. Of those, we anticipate 85-90% will complete the degree. We expect to maintain 250-350 undergraduate students in each degree program (elementary and secondary).

For students who do not complete the teacher licensure requirements but still earn the education degree, there are related career opportunities in the field, such as: teaching in private schools or online programs, hospitals providing educational services for long-term school-aged patients, professional tutoring, designing curriculum for textbook companies, developing exams for testing agencies, or working in educational outreach programs for museums/parks or agencies providing professional development to PK-12 teachers. Students who qualify may also apply to one of our graduate programs.

Benefits to Students

Undergraduate education degrees allow a route to licensure without the added expense and time of graduate school. Having clearly visible education majors will allow high-school students, who are specifically interested in teaching, to imagine themselves at Virginia Tech. High-school and community college students who are participating in future educator programs will be able to readily transition into our undergraduate majors instead of going through other programs to be eligible for graduate study. Undergraduate programs also allow more graduates to obtain a full teaching license upon completion of their bachelor’s program.

Undergraduate programs create more opportunities for students to learn their content within the context of teaching it, creating stronger connections between pedagogy and content knowledge. The increased length of time prospective teacher candidates will spend in the program will allow us to properly scaffold their learning and provide valuable feedback throughout the degree. It will also provide students opportunities to
meaningfully reflect on their coursework and teaching experiences as they develop essential educator dispositions.

Finally, offering formal education majors will encourage a sense of belongingness and professional identity among future educators. Sense of belonging and its impact on student success has been well documented in higher education research. A college students’ sense of belonging is related to several things, including engagement and retention, motivation, and academic performance. Equally important to education students, is the development of a professional teacher identity. This identity promotes effectiveness and well-being and is developed, in-part, through interactions with peers during shared pre-professional experiences.

**Benefits to Community**

Maintaining the quality of our program while reducing financial barriers and expediting the licensure process advances the teaching profession, as well. Under certain circumstances, an individual with a bachelor’s degree can obtain provisional licensure and teach in PK-12 settings without any formal training in the classroom. Research shows that alternatively licensed teachers, such as these, leave the profession at a much high rate than those who have finished an approved educator preparation program and we know that teacher turnover leads to significant recruitment and training costs for school systems while negatively impacting student achievement and overall teacher effectiveness. Providing teaching candidates with proper preparation and earlier and more frequent opportunities in classrooms will reduce this type of teacher attrition.

**Resources Needed:**

The graduation checksheets for education majors are comprised mostly of redesigned courses within the existing master’s program including previously required content courses. A few new courses were developed to offer additional scaffolding opportunities (such as field study and first year experience) and foundational material. By redeveloping existing courses and utilizing current undergraduate initiatives to the maximum extent possible, no new resources will be required to implement this new major at this time.

**Program Requirements:**

In addition to the enclosed graduation checksheet, students who are planning to become licensed will need to meet requirements set forth by the Virginia Department of Education including professional licensure examinations and certifications.
GRADUATION REQUIREMENTS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

Credits and GPA – Completion of a minimum of 120 credits with a minimum overall GPA of 2.5; and in-major GPA of 3.0. (In major GPA includes all EDCI and EDEP courses)

Prerequisites - Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Additional Requirements – Students must submit passing scores on required state licensure examinations.

SATISFACTORY PROGRESS TOWARD DEGREE

University Policy 91 requires a student to make satisfactory progress towards a degree. Additionally, licensure programs require that by the time a student has completed 72 credits, they must have passed all licensure examinations, carry an in-major GPA of 3.0, and be accepted into the educator preparation program.

PATHWAYS TO GENERAL EDUCATION (45 CREDITS)

*unless otherwise indicated, all courses taken to satisfy Pathways General Education must be taken on an A-F basis

Concept 1: Discourse (9 credits)

1f - Foundational
   ____ ENGL 1105 First-Year Writing (3 credits)
   ____ ENGL 1106 First-Year Writing (3 credits)

1a - Advanced/Applied
   ____ ENGL 3134 (WGS 3134) Gender and Linguistics (Pre: 1106 or 1204H or COMM 1016) (3 credits)

Concept 2: Critical Thinking in the Humanities (6 credits)

   ____ ENGL 4164 Studies in Shakespeare (Pre: 1106 or 1204H or COMM 1016) (3 credits)
   ____ (3 credits)

Concept 3: Reasoning in the Social Sciences (6 credits)

   ____ ENGL 3144 (RLCL 3144) (SOC 3144) Language and Ethnicity in the United States (Pre: 1106 or 1204H or COMM 1016) (3 credits)
   ____ (3 credits)

Concept 4: Reasoning in the Natural Sciences (6 credits)

   ____ (3 credits)
   ____ (3 credits)

Concept 5: Quantitative and Computational Thinking (9 credits)

5f - Foundational
   ____ (3 credits)
   ____ (3 credits)

5a - Advanced/Applied
   ____ (3 credits)

Concept 6: Critique and Practice in Design and the Arts (6 credits)

6d - Design
   ____ (3 credits)

6a - Arts
   ____ ENGL 2744 Introduction to Creative Writing (Pre: 1106 or 1204H or COMM 1016) (3 credits)

1 https://policies.vt.edu/91-eligibility-for-continued-enrollment.pdf
Concept 7: Critical Analysis of Identity and Equity in the United States (3 credits)

BACHELOR OF ARTS IN EDUCATION IN SECONDARY EDUCATION COMMON DEGREE CORE REQUIREMENTS

(21 CREDITS)

- EDCI 2574 Social Foundations of Education (3 credits)
- EDCI 4554 Educating Exceptional Learners (Pre: Junior Standing) (3 credits)
- EDCI 4724 Secondary School Teaching Methods I (Pre: Junior Standing) (3 credits)
- EDCI 4734 Adolescent Literacy and Reading (3 credits)
- EDCI 4744 Secondary School Teaching Methods II (Pre: 4724) (3 credits)
- EDEP 2374 Educational Psychology for PK-12 Teachers (Pre: Sophomore Standing) (3 credits)
- EDEP 3474 Principles and Practices in PK-12 Assessment (3 credits)

MAJOR IN ENGLISH LANGUAGE ARTS EDUCATION REQUIREMENTS (45 CREDITS)

- ENGL 2534 American Literary History (Pre: 1106 or 1204H or COMM 1016) (3 credits)
- ENGL 2544 British Literary History (Pre: 1106 or 1204H or COMM 1016) (3 credits)
- ENGL 3324 Acts of Interpretation (Pre: 2604) (3 credits)

World Literature (3 credits)

- choose one (1) from list below
  - ENGL 3514 Ethnic Literature for Children (Pre: 1106 or 1204H or COMM 1016) (3 credits)
  - ENGL 3694 Topics in World Novels (Pre: 1106 or 1204H or COMM 1016) (3 credits)

History of the English Language (3 credits)

- ENGL 4054 History of the English Language (3 credits)

Writing (6 credits)

- ENGL 2604 Introduction to Critical Reading (Pre: 1105 or COMM 1015) (3 credits) and
- Choose one (1) from list below
  - ENGL 3315 Playwriting (Pre: 1106 or 1204H or COMM 1016) (3 credits)
  - ENGL 3704 Creative Writing: Fiction (Pre: 2744) (3 credits)
  - ENGL 3714 Creative Writing: Poetry (Pre: 2744) (3 credits)
  - ENGL 3724 Creative Writing: Creative Non-Fiction (Pre: 2744) (3 credits)
  - ENGL 3764 Technical Writing (Pre: Junior Standing, 1106 or 1204H or COMM 1016) (3 credits)
  - ENGL 3804 Technical Editing and Style (Pre: 1106 or 1204 or 1204H or COMM 1016) (3 credits)

Underrepresented Authors (6 credits)

- Choose two (2) from list below
  - ENGL 2644 (APST 2644) Introduction to African-American Literature (Pre: 1106 or 1204H or COMM 1016) (3 credits)
  - ENGL 2808 (AINS 2804) Contemporary Native American Literature (Pre: 1106 or 1204H or COMM 1016) (3 credits)
  - ENGL 3364 Topics in Literature by Women (Pre: 1106 or 1204H or COMM 1016) (3 credits)
  - ENGL 3514 Ethnic Literature for Children (Pre: 1106 or 1204H or COMM 1016) (3 credits)
  - ENGL 3624 Appalachian Literature (Pre: 1106 or 1204H or COMM 1016) (3 credits)
  - ENGL 3654 Ethnic American Literature (Pre: 1106 or 1204H or COMM 1016) (3 credits)

Secondary Teaching Practicum (18 credits)

- ENGL 3734 Community Writing (Pre: 2744) (3 credits)
- EDCI 3964 Field Work/Practicum (6 credits)
- EDCI 4964 Field Work/Practicum (9 credits)

FREE ELECTIVE COURSES (9 CREDITS)

TOTAL CREDITS 120

2 unless otherwise indicated, all courses must be taken on an A-F basis; courses satisfying degree core requirements may not be double counted to satisfy other areas of a degree.
GRADUATION REQUIREMENTS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

Credits and GPA – Completion of a minimum of 120 credits with a minimum overall GPA of 2.5; and in-major GPA of 3.0. (In major GPA includes all EDCI and EDEP courses)

Prerequisites - Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Additional Requirements – Students must submit passing scores on required state licensure examinations.

SATISFACTORY PROGRESS TOWARD DEGREE

University Policy 91\(^1\) requires a student to make satisfactory progress towards a degree. Additionally, licensure programs require that by the time a student has completed 72 credits, they must have passed all licensure examinations, carry an in-major GPA of 3.0, and be accepted into the educator preparation program.

PATHWAYS TO GENERAL EDUCATION (45 CREDITS)

*unless otherwise indicated, all courses taken to satisfy Pathways General Education must be taken on an A-F basis

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<thead>
<tr>
<th>Concept 1: Discourse (9 credits)</th>
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<td>1f - Foundational</td>
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<th>Concept 2: Critical Thinking in the Humanities (6 credits)</th>
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<td>_____ HIST 1115 History of the United States (3 credits)</td>
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<td>_____ HIST 1116 History of the United States (3 credits)</td>
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<th>Concept 3: Reasoning in the Social Sciences (6 credits)</th>
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<td>_____ GEOG 1004 Introduction to Human Geography (3 credits)</td>
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<td>_____ GEOG 1014 World Regions (3 credits)</td>
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<th>Concept 5: Quantitative and Computational Thinking (9 credits)</th>
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<tr>
<td>5f - Foundational</td>
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<td>_____ GEOG 1084 (FREC 1004) Digital Planet (3 credits)</td>
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<th>Concept 6: Critique and Practice in Design and the Arts (6 credits)</th>
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<td>6d - Design</td>
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<th>Concept 7: Critical Analysis of Identity and Equity in the United States (3 credits)</th>
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<tr>
<td>_____ PSCI 1014 Introduction to United States Government and Politics (3 credits)</td>
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\(^1\)https://policies.vt.edu/91-eligibility-for-continued-enrollment.pdf
BACHELOR OF ARTS IN EDUCATION IN SECONDARY EDUCATION COMMON DEGREE CORE REQUIREMENTS

(21 credits)

- EDCI 2574 Social Foundations of Education (3 credits)
- EDCI 4554 Educating Exceptional Learners (Pre: Junior Standing) (3 credits)
- EDCI 4724 Secondary School Teaching Methods I (Pre: Junior Standing) (3 credits)
- EDCI 4734 Adolescent Literacy and Reading (3 credits)
- EDCI 4744 Secondary School Teaching Methods II (Pre: 4724) (3 credits)
- EDEP 2374 Educational Psychology for PK-12 Teachers (Pre: Sophomore Standing) (3 credits)
- EDEP 3474 Principles and Practices in PK-12 Assessment (3 credits)

MAJOR IN HISTORY AND SOCIAL SCIENCES EDUCATION REQUIREMENTS (42 CREDITS)

Virginia/South History (3 credits)

- Choose one (1) from list below
  - HIST 3205 US South (3 credits)
  - HIST 3224 History of Virginia (3 credits)

World History (6 credits)

- HIST 1215 Intro to World History (3 credits)
- HIST 1216 Intro to World History (3 credits)

Economic Development (3 credits)

- HIST 3114 History of Capitalism (3 credits)

History Depth Electives (6 credits)

- Choose two (2) from list of approved courses

Political Science Depth Electives (6 credits)

- PSCI 1024 (IS 1024) Introduction to Comparative Government and Politics (3 credits) and
- Choose one (1) from list of approved courses (3 credits) and
- Virginia State and Local Government Civics Module (online)

Research Methods (3 credits)

- Choose one (1) from list below
  - HIST 2004 Historical Methods (3 credits)
  - PSCI 2024 Research Methods in Political Science (3 credits)

Secondary Teaching Practicum (15 credits)

- EDCI 3964 Field Work/Practicum (6 credits)
- EDCI 4964 Field Work/Practicum (9 credits)

FREE ELECTIVE COURSES (12 CREDITS)

TOTAL CREDITS 120

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2 unless otherwise indicated, all courses must be taken on an A-F basis; courses satisfying degree core requirements may not be double counted to satisfy other areas of a degree.
3 See advisor for substitutions
4 not for course credit, certificate of successful completion is part of formal acceptance into teacher preparation program
<table>
<thead>
<tr>
<th>Approved History Depth Courses</th>
<th>Approved Political Science Depth Courses</th>
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</thead>
<tbody>
<tr>
<td>*HIST 2275 or 2276 African-American History (3 credits)</td>
<td>PSCI 2014 Introduction to Political Theory (3 credits)</td>
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<tr>
<td>*HIST 3144 American Environmental History (3 credits)</td>
<td>PSCI 3015,3016 (PHIL 3015, 3016) Political Theory (Pre: 2014) (3 credits)</td>
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<tr>
<td>*HIST 3564 The Cold War (3 credits)</td>
<td>PSCI 3334 Judicial Process (Pre: 1014 or 1014H) (3 credits)</td>
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<tr>
<td>*RLCL 1214 Medieval World (3 credits)</td>
<td>PSCI 3424 State and Local Government (Pre: 1014 or 1014H) (3 credits)</td>
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<tr>
<td>HIST 1515 or 1516 History of Africa (3 credits)</td>
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<tr>
<td>HIST 2104 Topics and Critical Issues in US History (3 credits)</td>
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<tr>
<td>HIST 2114 Topics Critical Issues in European History (3 credits)</td>
<td>Alternate Economics Courses</td>
</tr>
<tr>
<td>HIST 2124 Topics Critical Issues in World History (3 credits)</td>
<td>PSCI/ECON/PHEL 2894 Introduction Philosophy, Politics, and Economics (PW-1a)</td>
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<tr>
<td>HIST 2345 History of the Middle East (3 credits)</td>
<td>PSCI/GEOG/IS 2064: The Global Economy and World Politics (PW-3)</td>
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<tr>
<td>HIST 2355 History of China (3 credits)</td>
<td>ECON 2005 Principles of Economics (PW-3)</td>
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<td>HIST 2364 History of Japan (3 credits)</td>
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<tr>
<td>HIST 2384 (RLCL 2384) Gandi in the Making of Modern India (3 credits)</td>
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<td>HIST 2715 (STS 2715) History of Technology (3 credits)</td>
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<td>HIST3004 Colonial America (3 credits)</td>
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<tr>
<td>HIST 3014 The American Revolution (3 credits)</td>
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<td>HIST 3054 American Civil War (3 credits)</td>
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<tr>
<td>HIST 3064 Emergence of Modern America (3 credits)</td>
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<tr>
<td>HIST 3084 Recent America (3 credits)</td>
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<td>HIST 3234 The North American West (3 credits)</td>
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<td>HIST 3304 The World of Alexander the Great (3 credits)</td>
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<td>HIST 3334 The Renaissance (3 credits)</td>
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<tr>
<td>HIST 3344 The Era of Reformation (3 credits)</td>
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<tr>
<td>HIST 3364 Age of Revolution and Napoleon (3 credits)</td>
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<tr>
<td>HIST 3544 World War II (3 credits)</td>
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<tr>
<td>HIST 3554 Age of Globalization (3 credits)</td>
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<tr>
<td>HIST 3714 War and Medicine (3 credits)</td>
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<tr>
<td>HIST 3774 Digital History (3 credits)</td>
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</table>
GRADUATION REQUIREMENTS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

Credits and GPA – Completion of a minimum of 120 credits with a minimum overall GPA of 2.5; and in-major GPA of 3.0. (In major GPA includes all EDCI and EDEP courses)

Prerequisites - Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Additional Requirements – Students must submit passing scores on required state licensure examinations.

SATISFACTORY PROGRESS TOWARD DEGREE

University Policy 91\(^1\) requires a student to make satisfactory progress towards a degree. Additionally, licensure programs require that by the time a student has completed 72 credits, they must have passed all licensure examinations, carry an in-major GPA of 3.0, and be accepted into the educator preparation program.

PATHWAYS TO GENERAL EDUCATION (47 CREDITS)

*unless otherwise indicated, all courses taken to satisfy Pathways General Education must be taken on an A-F basis

Concept 1: Discourse (9 credits)

1f - Foundational
   _____ ENGL 1105 First-Year Writing (3 credits) or COMM 1015 Communication Skills (3 credits)
   _____ ENGL 1106 First-Year Writing (3 credits) or COMM 1016 Communication Skills (3 credits)

1a - Advanced/Applied
   _____ (3 credits)

Concept 2: Critical Thinking in the Humanities (6 credits)

   _____ (3 credits)
   _____ (3 credits)

Concept 3: Reasoning in the Social Sciences (6 credits)

   _____ (3 credits)
   _____ (3 credits)

Concept 4: Reasoning in the Natural Sciences (6 credits)

   _____ (3 credits)
   _____ (3 credits)

Concept 5: Quantitative and Computational Thinking (11 credits)

5f - Foundational
   _____ MATH 1225 Calculus of a Single Variable (4 credits)
   _____ MATH 1226 Calculus of a Single Variable (Pre: Grade of at least C- in 1225) (4 credits)

5a - Advanced/Applied
   _____ STAT 3005 Statistical Methods (Co: MATH 1206 or MATH 1226. Pre: MATH 1205 or MATH 1225) (3 credits)

Concept 6: Critique and Practice in Design and the Arts (6 credits)

6d - Design
   _____ (3 credits)

6a - Arts
   _____ (3 credits)

Concept 7: Critical Analysis of Identity and Equity in the United States (3 credits)

   _____ (3 credits)

\(^1\) https://policies.vt.edu/91-eligibility-for-continued-enrollment.pdf
BACHELOR OF SCIENCE IN EDUCATION IN SECONDARY EDUCATION COMMON DEGREE CORE REQUIREMENTS

(21 CREDITS)

- EDCI 2574 Social Foundations of Education (3 credits)
- EDCI 4554 Educating Exceptional Learners (Pre: Junior Standing) (3 credits)
- EDCI 4724 Secondary School Teaching Methods I (Pre: Junior Standing) (3 credits)
- EDCI 4734 Adolescent Literacy and Reading (3 credits)
- EDCI 4744 Secondary School Teaching Methods II (Pre: 4724) (3 credits)
- EDEP 2374 Educational Psychology for PK-12 Teachers (Pre: Sophomore Standing) (3 credits)
- EDEP 3474 Principles and Practices in PK-12 Assessment (3 credits)

MAJOR IN MATHEMATICS EDUCATION REQUIREMENTS (51 CREDITS)

MATH 1004 Discovering Mathematics I (Pass/Fail only) (1 credit)
MATH 1044 Discovering Mathematics II (2 credits)
MATH 2114 Introduction to Linear Algebra (Pre: 1225 or 1226) (3 credits)
MATH 2204 Introduction to Multivariable Calculus (Pre: 1226) (3 credits)
MATH 3034 Introduction to Proofs (Pre: 2114 or 2114H or 2405H) (3 credits)
MATH 3124 Modern Algebra (Pre: 3034) (3 credits)
MATH 3224 Advanced Calculus (Pre: (2224 or 2224H or 2204 or 2204H or 2406H or CMDA 2005), MATH 3034) (3 credits)
MATH 4044 History of Mathematics (Pre: Senior Standing) (3 credits)
MATH 4334 College Geometry (Pre: 1114 or 2114 or 2114H or 2405H, 1226) (3 credits)
MATH 4625 Mathematics for Secondary Teachers I (Pre: 3034) (3 credits)
MATH 4626 Mathematics for Secondary Teachers II (Pre: 3034) (3 credits)
EDCI 4244 Curriculum and Instruction in the Middle School Classroom (4-8) (3 credits)

Computer Programming (3 credits)

- choose one (1) from list below
  - CS 1044 Introduction to Programming in C++ (3 credits)
  - CS 1054 Introduction to Programming in Java (3 credits)
  - CS 1064 Introduction to Programming in Python (3 credits)
  - CS 1114 Introduction to Software Design (3 credits)

Secondary Teaching Practicum (15 credits)

- EDCI 3964 Field Work/Practicum (6 credits)
- EDCI 4964 Field Work/Practicum (9 credits)

FREE ELECTIVE COURSES (1 CREDIT)

TOTAL CREDITS 120

\(^2\)unless otherwise indicated, all courses must be taken on an A-F basis; courses satisfying degree core requirements may not be double counted to satisfy other areas of a degree.
GRADUATION REQUIREMENTS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

Credits and GPA – Completion of a minimum of 120 credits with a minimum overall GPA of 2.5; and in-major GPA of 3.0. (In major GPA includes all EDCl, EDCT, and EDEP courses)

Prerequisites - Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Additional Requirements – Students must submit passing scores on required state licensure examinations.

SATISFACTORY PROGRESS TOWARD DEGREE

University Policy 91\(^1\) requires a student to make satisfactory progress towards a degree. Additionally, licensure programs require that by the time a student has completed 72 credits, they must have passed all licensure examinations, carry an in-major GPA of 3.0, and be accepted into the educator preparation program.

PATHWAYS TO GENERAL EDUCATION (42 CREDITS)

*unless otherwise indicated, all courses taken to satisfy Pathways General Education must be taken on an A-F basis

Concept 1: Discourse (9 credits)
1f - Foundational
   □ ENGL 1105 First-Year Writing (3 credits)
   □ ENGL 1106 First-Year Writing (3 credits)
1a - Advanced/Applied
   □ ALCE 2414 (AINS 2414) Identity and Inclusion in Agriculture and Life Science (Pre: ENGL 1106) (3 credits, also meets Concept 7)

Concept 2: Critical Thinking in the Humanities (6 credits)
   □ FREC 2554 (LAR 2554) (NR 2554) Leadership for Global Sustainability (3 credits)
   □ (3 credits)

Concept 3: Reasoning in the Social Sciences (6 credits)
   □ AAEC 1005 Economics of Food and Fiber System (3 credits)
   □ AAEC 1006 Economics of Food and Fiber System (3 credits)

Concept 4: Reasoning in the Natural Sciences (6 credits)
   □ CHEM 1035 General Chemistry (3 credits)
   □ CHEM 1036 General Chemistry (Co: MATH 1025 or MATH 1225) (3 credits)

Concept 5: Quantitative and Computational Thinking (9 credits)
5f - Foundational
   □ GEOG 1084 (FREC 1004) Digital Planet (3 credits)
   □ MATH 1025 Elementary Calculus (3 credits)
5a - Advanced/Applied
   □ (3 credits)

Concept 6: Critique and Practice in Design and the Arts (6 credits)
6d - Design
   □ HORT 2164 Floral Design\(^2\) (3 credits)
6a - Arts
   □ (3 credits)

Concept 7: Critical Analysis of Identity and Equity in the United States (3 credits)
   □ ALCE 2414 (AINS 2414) Identity and Inclusion in Agriculture and Life Science (Pre: ENGL 1106) (3 credits, also meets Concept 1a)

\(^1\) https://policies.vt.edu/91-eligibility-for-continued-enrollment.pdf
\(^2\) Additional Fee Required
BACHELOR OF SCIENCE IN EDUCATION IN SECONDARY EDUCATION COMMON DEGREE CORE REQUIREMENTS
(21 CREDITS)

EDCI 2574 Social Foundations of Education (3 credits)
EDCI 4554 Educating Exceptional Learners (Pre: Junior Standing) (3 credits)
EDCI 4724 Secondary School Teaching Methods I (Pre: Junior Standing) (3 credits)
EDCI 4734 Adolescent Literacy and Reading (3 credits)
EDCI 4744 Secondary School Teaching Methods II (Pre: 4724) (3 credits)
EDEP 2374 Educational Psychology for PK-12 Teachers (Pre: Sophomore Standing) (3 credits)
EDEP 3474 Principles and Practices in PK-12 Assessment (3 credits)

MAJOR IN CAREER AND TECHNICAL EDUCATION - AGRICULTURAL EDUCATION REQUIREMENTS (56 CREDITS)

ALS 1234 CALS First Year Seminar (1 credit)
ALCE 3004 Educational Programs in Agricultural and Life Sciences (3 credits)
ALCE 3624 Communicating Agriculture & Life Sciences in Writing (3 credits)
ALCE 4064 Ag Mechanical Lab Management (3 credits)
ALCE/EDCT 4034 Methods of Planning Educational Programs for Agriculture (Pre: ALCE 3004) (3 credits)
ALCE/EDCT 4884 Youth Program Management (3 credits)
EDCT 4624 Managing CTE Programs (3 credits)
APSC 1454 Introduction to Animal & Poultry Science (Co: 1464) (3 credits)
APSC 1464 Animal and Poultry Science Laboratory (Co: 1454) (1 credit)
BSE 2094 Introduction to Metal Fabrication (1 credit)
BSE 2484 Engine and Power Train Technology (Pre: MATH 1016 or MATH 1025) (3 credits)
CSES 2444 Agronomic Crops (3 credits)
CSES 3114 (ENSC 3114) (GEOS 3614) Soils (Pre: CHEM 1036. Co: 3124) (3 credits)
CSES 3124 (ENSC 3124) (GEOS 3624) Soils Laboratory (Co: 3114) (1 credit)
ENSC 3604 Fundamentals of Environmental Science (Pre: BIOL 1105 or CHEM 1035) (3 credits)
FREC 2004 Forest Ecosystems (3 credits)
HORT 2224 Horticulture Science and Industry (2 credits)
SBIO 2614 Introduction to Forest Products Marketing (3 credits)

Field-Based Requirements (11 credits)
ALCE 4024 Managing Agricultural Supervised Occupational Experience Project (2 credits)
EDCT/ALCE 4754 Internship in Education (3 credits)
EDCT/ALCE 4964 Field Work/Practicum (6 credits)

FREE ELECTIVE COURSES (1 CREDIT)

TOTAL CREDITS 120

3 unless otherwise indicated, all courses must be taken on an A-F basis; courses satisfying degree core requirements may not be double counted to satisfy other areas of a degree.
GRADUATION REQUIREMENTS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

Credits and GPA – Completion of a minimum of 120 credits with a minimum overall GPA of 2.5; and in-major GPA of 3.0. (In major GPA includes all EDCI and EDEP courses)

Prerequisites - Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Additional Requirements – Students must submit passing scores on required state licensure examinations.

SATISFACTORY PROGRESS TOWARD DEGREE

University Policy 91 requires a student to make satisfactory progress towards a degree. Additionally, licensure programs require that by the time a student has completed 72 credits, they must have passed all licensure examinations, carry an in-major GPA of 3.0, and be accepted into the educator preparation program.

PATHWAYS TO GENERAL EDUCATION (42 CREDITS)

*unless otherwise indicated, all courses taken to satisfy Pathways General Education must be taken on an A-F basis

Concept 1: Discourse (9 credits)

1f - Foundational

___ ENGL 1105 First-Year Writing (3 credits)
___ ENGL 1106 First-Year Writing (3 credits)

1a - Advanced/Applied

___ COMM 2004 Public Speaking (Pre: Sophomore Standing)(3 credits)

Concept 2: Critical Thinking in the Humanities (6 credits)

___ RLCL 2204 (WGS2204) (AFST 2204) Race and Gender in Religion and Culture (also meets Concept 7) (3 credits)
___ PHIL 2304 Global Ethics (3 credits)

Concept 3: Reasoning in the Social Sciences (6 credits)

___ PSYC 1004 Introductory Psychology (3 credits)
___ PSYC 2034 Developmental Psychology (Pre: 1004) (3 credits)

Concept 4: Reasoning in the Natural Sciences (6 credits)

___ (3 credits)
___ (3 credits)

Concept 5: Quantitative and Computational Thinking (9 credits)

5f - Foundational

___ HIST 2604 (SOC 2604) (STS 2604) Introduction to Data in Social Context or SOC 2104 (HD 2104) Quantitative Approaches to Community Research (3 credits)
___ CONS 2304 Consumer and Family Finances (3 credits)

5a - Advanced/Applied

___ (3 credits)

Concept 6: Critique and Practice in Design and the Arts (6 credits)

6d - Design

___ RED 2604 Residential Design (3 credits)

6a - Arts

1 https://policies.vt.edu/91-eligibility-for-continued-enrollment.pdf
### Bachelor of Science in Education in Secondary Education Common Degree Core Requirements (21 Credits)

- **EDCI 2574** Social Foundations of Education (3 credits)
- **EDCI 4554** Educating Exceptional Learners (Prerequisite: Junior Standing) (3 credits)
- **EDCI 4724** Secondary School Teaching Methods I (Prerequisite: Junior Standing) (3 credits)
- **EDCI 4734** Adolescent Literacy and Reading (3 credits)
- **EDCI 4744** Secondary School Teaching Methods II (Pre: 4724) (3 credits)
- **EDEP 2374** Educational Psychology for PK-12 Teachers (Prerequisite: Sophomore Standing) (3 credits)
- **EDEP 3474** Principles and Practices in PK-12 Assessment (3 credits)

### Major in Career and Technical Education Requirements (18 Credits)

- **EDCT 2604** Introduction to CTE (3 credits)
- **EDCT 4624** Managing CTE Programs (3 credits)
- **EDCT/ALCE 4884** Youth Program Management (3 credits)

### Field-Based Requirements (9 credits)

- **EDCT 3964** Field Work/Practicum (3 credits)
- **EDCT 4964** Field Work/Practicum (6 credits)

### Option in Family and Consumer Sciences Education Requirements (39 Credits)

- **AHRM 2404** Consumer Rights (3 credits)
- **CONS 3404** Consumer Education Strategies (Prerequisite: 2304 and AHRM 2404) (3 credits)
- **EDCT 2964** Industry Field Experience (2 credits)
- **FMD 1204** Clothing and People (3 credits)
- **HNFE 1004** Foods, Nutrition, and Exercise (3 credits)
- **HTM 3414** Food Preparation, Purchasing and Management (Pre: Junior Standing) (4 credits)
- **RED 2614** Introduction Residential Technologies (2 credits)
- **RED 2634** Residential Technologies Lab (Co: 2614) (1 credit)
- **RED 2644** Housing and the Consumer (3 credits)
- **RED 4664** Universal Design (3 credits)
- **SOC 1004** Introductory Sociology (3 credits)
- **SOC 2014** Sociology of Intimate Relationships (3 credits)
- **SOC 3714** Sociology of Aging (Prerequisite: 1004) (3 credits)
- **SOC 4014** Sociology of the Family (Prerequisite: 2014) (3 credits)

### Free Elective Courses (0 Credits)

### Total Credits 120

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2 unless otherwise indicated, all courses must be taken on an A-F basis; courses satisfying degree core requirements may not be double counted to satisfy other areas of a degree.

3 Additional Fee Required
GRADUATION REQUIREMENTS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

Credits and GPA – Completion of a minimum of 120 credits with a minimum overall GPA of 2.5; and in-major GPA of 3.0. (In major GPA includes all EDCI and EDEP courses)

Prerequisites - Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Additional Requirements – Students must submit passing scores on required state licensure examinations.

SATISFACTORY PROGRESS TOWARD DEGREE

University Policy 91\(^1\) requires a student to make satisfactory progress towards a degree. Additionally, licensure programs require that by the time a student has completed 72 credits, they must have passed all licensure examinations, carry an in-major GPA of 3.0, and be accepted into the educator preparation program.

PATHWAYS TO GENERAL EDUCATION (46 CREDITS)

*unless otherwise indicated, all courses taken to satisfy Pathways General Education must be taken on an A-F basis

Concept 1: Discourse (9 credits)

1f - Foundational
- ENGL 1105 First-Year Writing (3 credits)
- ENGL 1106 First-Year Writing (3 credits)

1a - Advanced/Applied
- ENGL 3844 Writing and Digital Media (Pre: 1106 or 1204H or COMM 1016) (3 credits)

Concept 2: Critical Thinking in the Humanities (6 credits)

- PHIL 2304 Global Ethics (3 credits)
- BIT 4604 Data Governance, Privacy, and Ethics (Pre: 2405 or CMDA 2014 or CS 1114 or CS 1054 or CS 1064) (3 credits)

Concept 3: Reasoning in the Social Sciences (6 credits)

- ECON 2005 Principles of Economics (3 credits)
- ECON 2006 Principles of Economics (3 credits)

Concept 4: Reasoning in the Natural Sciences (6 credits)

- (3 credits)
- (3 credits)

Concept 5: Quantitative and Computational Thinking (10 credits)

5f - Foundational
- MATH 1524 Business Calculus (4 credits)
- BIT 2405 Introduction to Business Statistics, Analytics, & Modeling (Pre: MATH 1524... see catalog for more) (3 credits)

5a - Advanced/Applied
- AAEC 2104 Personal Financial Planning (3 credits)

Concept 6: Critique and Practice in Design and the Arts (6 credits)

6d - Design
- MGT 2064 Foundations Entrepreneurship (3 credits)

6a - Arts
- (3 credits)

Concept 7: Critical Analysis of Identity and Equity in the United States (3 credits)

- MGT 3444 Multicultural Diversity in Organizations (Pre: Junior Standing) (3 credits)

\(^1\) https://policies.vt.edu/91-eligibility-for-continued-enrollment.pdf
## Bachelor of Science in Education in Secondary Education Common Degree Core Requirements (21 Credits)

- EDCI 2574 Social Foundations of Education (3 credits)
- EDCI 4554 Educating Exceptional Learners (Pre: Junior Standing) (3 credits)
- EDCI 4724 Secondary School Teaching Methods I (Pre: Junior Standing) (3 credits)
- EDCI 4734 Adolescent Literacy and Reading (3 credits)
- EDCI 4744 Secondary School Teaching Methods II (Pre: 4724) (3 credits)
- EDEP 2374 Educational Psychology for PK-12 Teachers (Pre: Sophomore Standing) (3 credits)
- EDEP 3474 Principles and Practices in PK-12 Assessment (3 credits)

## Major in Career and Technical Education Requirements (18 Credits)

- EDCT 2604 Introduction to CTE (3 credits)
- EDCT 4624 Managing CTE Programs (3 credits)
- EDCT/ALCE 4884 Youth Program Management (3 credits)

### Field-Based Requirements (9 credits)

- EDCT 3964 Field Work/Practicum (3 credits)
- EDCT 4964 Field Work/Practicum (6 credits)

## Option in Business and Information Technology Education Requirements (29 Credits)

- ACIS 1504 Introduction to Business Analytics & Business Intelligence (3 credits)
- ACIS 2115 Principles of Accounting (Pre: Sophomore standing) (3 credits)
- ACIS 2116 Principles of Accounting II (Pre: A grade of C- or better in ACIS 2115) (3 credits)
- EDCT 1474 Computer Information Systems (3 credits)
- EDCI 2964 Field Study/Practicum (2 credits)
- FIN 2114 Investments and Financial Literacy (3 credits)
- FIN 3054 Legal and Ethical Environment of Business (Pre: Junior Standing) (3 credits)
- HTM 2314 (MGT 2314) Introduction to International Business (3 credits)
- MGT 3304 Management Theory and Leadership Practice (Pre: Sophomore standing) (3 credits)
- MKTG 3104 Marketing Management (Pre: Junior Standing) (3 credits)

## Free Elective Courses (6 Credits)

## Total Credits 120

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2 unless otherwise indicated, all courses must be taken on an A-F basis; courses satisfying degree core requirements may not be double counted to satisfy other areas of a degree.
College of Liberal Arts and Human Sciences
School of Education
Bachelor of Science in Education in Secondary Education
Major in Career and Technical Education
Option in Marketing Education
For students entering under UG Catalog 2021-2022

GRADUATION REQUIREMENTS

Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.

Credits and GPA – Completion of a minimum of 120 credits with a minimum overall GPA of 2.5; and in-major GPA of 3.0. (In major GPA includes all EDCI and EDEP courses)

Prerequisites - Some courses listed on this checksheet may have pre-/co-requisites; please consult the University Course Catalog or check with your advisor.

Additional Requirements – Students must submit passing scores on required state licensure examinations.

SATISFACTORY PROGRESS TOWARD DEGREE

University Policy 91\(^1\) requires a student to make satisfactory progress towards a degree. Additionally, licensure programs require that by the time a student has completed 72 credits, they must have passed all licensure examinations, carry an in-major GPA of 3.0, and be accepted into the educator preparation program.

PATHWAYS TO GENERAL EDUCATION (46 CREDITS)
*unless otherwise indicated, all courses taken to satisfy Pathways General Education must be taken on an A-F basis

Concept 1: Discourse (9 credits)
1f - Foundational
   ____ COMM 1015 Communication Skills (3 credits)
   ____ COMM 1016 Communication Skills (3 credits)

1a - Advanced/Applied
   ____ (3 credits)

Concept 2: Critical Thinking in the Humanities (6 credits)
   ____ STS 2254 Innovation in Context (3 credits)
   ____ (3 credits)

Concept 3: Reasoning in the Social Sciences (6 credits)
   ____ ECON 2005 Principles of Economics (3 credits)
   ____ ECON 2006 Principles of Economics (3 credits)

Concept 4: Reasoning in the Natural Sciences (6 credits)
   ____ (3 credits)
   ____ (3 credits)

Concept 5: Quantitative and Computational Thinking (10 credits)
5f - Foundational
   ____ MATH 1524 Business Calculus (4 credits)
   ____ BIT 2405 Introduction to Business Statistics, Analytics, & Modeling (Pre: MATH 1524... see catalog for more) (3 credits)

5a - Advanced/Applied
   ____ 3 credits)

Concept 6: Critique and Practice in Design and the Arts (6 credits)
6d - Design
   ____ HTM 3424 Event Management (Pre: Sophomore standing) (3 credits)

6a - Arts
   ____ (3 credits)

Concept 7: Critical Analysis of Identity and Equity in the United States (3 credits)
   ____ MGT 3444 Multicultural Diversity in Organizations (Pre: Junior Standing) (3 credits)

\(^1\) https://policies.vt.edu/91-eligibility-for-continued-enrollment.pdf
BACHELOR OF SCIENCE IN EDUCATION IN SECONDARY EDUCATION COMMON DEGREE CORE REQUIREMENTS
(21 CREDITS)

- EDCI 2574 Social Foundations of Education (3 credits)
- EDCI 4554 Educating Exceptional Learners (Pre: Junior Standing) (3 credits)
- EDCI 4724 Secondary School Teaching Methods I (Pre: Junior Standing) (3 credits)
- EDCI 4734 Adolescent Literacy and Reading (3 credits)
- EDCI 4744 Secondary School Teaching Methods II (Pre: 4724) (3 credits)
- EDEP 2374 Educational Psychology for PK-12 Teachers (Pre: Sophomore Standing) (3 credits)
- EDEP 3474 Principles and Practices in PK-12 Assessment (3 credits)

MAJOR IN CAREER AND TECHNICAL EDUCATION REQUIREMENTS (18 CREDITS)

- EDCT 2604 Introduction to CTE (3 credits)
- EDCT 4624 Managing CTE Programs (3 credits)
- EDCT/ALCE 4884 Youth Program Management (3 credits)

Field-Based Requirements (9 credits)

- EDCT 3964 Field Work/Practicum (3 credits)
- EDCT 4964 Field Work/Practicum (6 credits)

OPTION IN MARKETING EDUCATION REQUIREMENTS (33 CREDITS)

- ACIS 1504 Introduction to Bus Analytics and Bus Intelligence (3 credits)
- ACIS 2115 Principles of Accounting (Pre: Sophomore standing) (3 credits)
- CMST 3214 Professional Communication (Pre: COMM 1016 or COMM 2004) (3 credits)
- MGT 3304 Management Theory and Leadership Practice (Pre: Sophomore standing) (3 credits)
- MKTG 3104 Marketing Management (Pre: Junior Standing) (3 credits)
- MKTG 3504 Advertising (Pre: 3104 or 3104H) (3 credits)
- MKTG 4204 Consumer Behavior (Pre: 3104 or 3104H) (3 credits)
- MKTG 4554 Relationships Among Buyers and Sellers (Pre: 3104 or 3104H) (3 credits)
- MKTG 4604 Retail Management (Pre: 3104 or 3104H) (3 credits)
- MKTG 4704 International Marketing (Pre: 3104 or 3104H) (3 credits)
- MKTG 4774 Advanced Professional Selling (Pre: 4554, 4204, 3104 or 3104H) (3 credits)

FREE ELECTIVE COURSES (2 CREDITS)

TOTAL CREDITS 120

2 unless otherwise indicated, all courses must be taken on an A-F basis; courses satisfying degree core requirements may not be double counted to satisfy other areas of a degree.
TO: Curriculum Committee Members

FROM: Nancy Bodenhorst
Associate Director, Office of Academic Programs, School of Education

RE: 2021 B.S. Ed./B.A.Ed. in Secondary Education (new degree)

DATE: January 24, 2020

The Virginia Tech School of Education is requesting approval for the addition of a Bachelor's degree in Secondary Education. This new degree will provide us the opportunity to offer a four-year opportunity for those students who intend to join the teaching profession. For the past decade, Virginia has limited Education degrees to graduate degrees, and just opened this possibility in 2019. The Bachelor's degree was re-established as one response to a critical teacher shortage, of which Math, English, History, and Career and Technical Education have been in the top ten in Virginia during the last five years. We are eager to be part of the solution and provide well prepared teachers for our public school districts.

Education degrees are monitored by the Virginia Department of Education for the required licensure. The degree checksheet is being developed to meet all of these requirements. Our goal is to have all approvals in place to admit students in 2021 and 2022.

The School of Education does not require additional resources to offer this new degree, as the resources will be redirected and/or shared with the concurrent graduate program.
Dawn Knight <dknight1@vt.edu>

To: mattholt@vt.edu

Wed, Jul 15, 2020 at 1:51 PM

Hello Dr. Holt,

I am putting together undergraduate curriculum committee program proposals for new Education majors and I was hoping to get written support from your department allowing us to include courses on our graduation checksheets. Currently we are submitting proposals for Career and Technical Education which includes four proposed majors: Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. The following have requested permission to include courses from your department as Pathways requirements on graduation checksheets.

I am told that if you are willing to agree, an email reply to that effect is sufficient.

Agricultural Education
- AAEC 1005 Econ Food Fiber Sys
- AAEC 1006 Econ Food Fiber Syst

Business and Information Technology Education
- AAEC 2104 Personal Financial Planning

Marketing Education
- AAEC 2104 Personal Financial Planning

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction? Thank you for your time.

--

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Holt, Matthew <mattholt@vt.edu>

Thu, Jul 16, 2020 at 9:42 AM

Hi Dawn,

I have checked with the current instructors of the classes listed below, and all are enthusiastic about the opportunity to be included as meeting various Pathways requirements for the new majors you are proposing. In short, as Head of the Department of Agricultural and Applied Economics I agree with and support what you have outlined below vis-à-vis the courses offered in my department.

Please let me know if you require anything further from me/us.

Best regards,

Matt
Hello Dawn,

We can handle the 8 to 10 Career and technical Education students in the classes you request. We restrict these courses to Pamplin College students due to capacity constraints. I summarize the semester that are likely to be open for each course below.

Jack Maher

Career and Technical Education

ACIS 1504 Introduction to Bus Analytics and Bus Intelligence (Spring, Summer, Winter)
ACIS 2115 Principles of Accounting (Fall, Winter, Summer)
ACIS 2116 Principles of Accounting II (Spring, Winter, Summer)

John J. (Jack) Maher

Department Head and
Tom Wells/Kathy Dargo Professor
Dept. of Accounting and Information Systems
Pamplin College of Business - Virginia Tech
Blacksburg, VA 24061
USA

From: Dawn Knight <dknight1@vt.edu>
Sent: Friday, August 21, 2020 12:39 PM
To: Maher, John <jmaher@vt.edu>
Cc: Bodenhorn, Nancy <nanboden@vt.edu>
Subject: Business Courses on Education Checksheets

Hello Dr. Maher,

I hope this finds you well and ready to jump into fall semester! After considering feedback from SCHEV, the Department of Education, and affected departments, we have made some adjustments to our program proposals. Thank you to everyone who shared their thoughts.

Today I am writing to ask your department's permission to include the courses listed below on the graduation checksheet for our proposed Career and Technical Education major. The content from these courses meets VDOE licensure competencies in Marketing Education and Business and Information Technology Education. We do not expect more than 8 or 10 students to choose these licensure options each year.

ACIS 1504 Introduction to Bus Analytics and Bus Intelligence
ACIS 2115 Principles of Accounting
ACIS 2116 Principles of Accounting II

Thank you for your time. I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?
Hi Julia,

I am currently putting together an undergraduate curriculum committee program proposal for a new Family and Consumer Sciences Education major and I was hoping to get written support from your department allowing us to include the following courses on the graduation checksheet.

- AHRM 1014 Design and Art for Consumers (as Pathways)
- CONS 2304 Consumer and Family Finances (as Pathways)
- CONS 3504 Resource Management for Individuals and Families
- FMD 1204 Clothing and People
- FMD 3224 Apparel Production
- RED 2604 Residential Design (as Pathways)
- RED 2644 Housing and the Consumer

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Dustin Read <dcread@vt.edu>
Sun, Jul 19, 2020 at 1:08 PM

Dawn,

Thanks for inquiring about including some AHRM courses on your checksheet. We generally have capacity in all of the courses you noted except for CONS 3504 and FMD 3224, so I'd welcome you to list all but those two. Please let me know if you have any additional questions.

Best,
Dustin

On Thu, Jul 16, 2020 at 7:25 AM Julia Beamish <jbeamish@vt.edu> wrote:

Hi Dawn, I am no longer department head of AHRM. I'm copying Dustin Read, new head, on this email, so that he can address this request. Thank you.
Julia

Dawn Knight <dknight1@vt.edu>
Mon, Jul 20, 2020 at 2:08 PM

Thank you!
Hi Dustin,

Here is a list of additional courses we would like to add to our new Family and Consumer Sciences Education major graduation checksheet based on our conversation last week.

- AHRM 2404 Consumer Rights
- CONS 3404 Consumer Education Strategies
- RED 2614/34 Intro Residential Technologies / Lab
- RED 4644 Universal Design

I am told that if you are willing to agree, an email response to that effect is sufficient.

Thank you!

--

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education
Hi Donna,

I am currently putting together the undergraduate curriculum committee program proposal for the Agricultural Education major and I was hoping to get written support from your department allowing us to include ALCE 2414 Identity and Inclusion in Agriculture, ALCE 3004 Educational Programs in Agricultural and Life Sciences, and ALCE 4064 Ag Mechanical Lab Management on the graduation checksheet.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

Thank you!

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Rutherford, Tracy <trutherford@vt.edu>  
To: "Westfall-Rudd, Donna" <mooredm@vt.edu>, "Knight, Dawn" <dknight1@vt.edu>  

Dawn,

We agree to the inclusion of ALCE 2414, ALCE 3004, and ALCE 4064 on the graduation checksheet for the agricultural education major.

Thank you,

TR
Cross listed ag ed

Rutherford, Tracy <trutherford@vt.edu>  
To: “Knight, Dawn” <dknight1@vt.edu>  
Mon, Aug 17, 2020 at 6:35 PM

Yes, also include ALCE 4024.

TR

Sent via the Samsung Galaxy 8, please excuse errors.

From: Dawn Knight <dknight1@vt.edu>  
Sent: Monday, August 17, 2020 5:35:33 PM  
To: Rutherford, Tracy <trutherford@vt.edu>  
[Quoted text hidden]  
[Quoted text hidden]
Hello Donna and Tracy,

I am writing for support from your department allowing us to include ALCE 3624 Communicating Agriculture & Life Sciences in Writing on our new Agricultural Education graduation checksheet.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Thank you!

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Yes, we approve use of ALCE 3524 on the AGED checksheet. I have attached the Spring 2020 syllabus.

TR

From: Dawn Knight <dknight1@vt.edu>
Date: Tuesday, July 28, 2020 at 4:20 PM
To: "Westfall-Rudd, Donna" <mooredm@vt.edu>, "Rutherford, Tracy" <trutherford@vt.edu>
Cc: "Bodenhorn, Nancy" <nanboden@vt.edu>
Subject: Request to Include ALCE 3624 on Education Checksheet
MEMORANDUM

TO: Dawn Knight-Withers,  
Pre-Education Advising Coordinator, Virginia Tech School of Education

FROM: Susan Sumner, Associate Dean and Director of Academic Programs

DATE: July 16, 2020

SUBJECT: ALS 1234 – CALS First Year Seminar

I am in support of including ALS 1234, CALS First Year Seminar, to the School of Education, Agricultural Education major checksheet. This will not require any new resources.
Hi, Dawn

My apologies. Things have been somewhat past crazy over here this summer. Thanks for following up.

We are okay with including APSC 1454 Introduction to Animal and Poultry Sciences on your Ag Ed checksheet as a required course. If you wish to include APSC 1464 Intro to APSC lab as an elective course, that is also fine. We just cannot guarantee seats in APSC 1464.

Good luck with the major. Please let me know if you need anything further from us.

Cindy

Dr. Cindy Wood
Associate Professor, Animal & Poultry Sciences
Co-Director, APSC Undergraduate Program
Virginia Tech
3020 Litton Reaves Hall
175 West Campus Drive
Blacksburg, VA 24061
piglady@vt.edu
540-231-6937

Join by Zoom: https://virginiatech.zoom.us/j/5402316937
Meeting ID: 540 231 6937
The BIT department approves the inclusion of BIT 2405 and BIT 4604 in the Career and Technical Education major. At the current numbers, no additional resources will be needed.

Roberta S. Russell  
Professor and Head  
Business Information Technology  
Pamplin College of Business  
Virginia Tech  
540-231-6596 (office)  
rrussell@vt.edu

Hello Dr. Russell,

I hope this finds you well and ready to jump into fall semester! After considering feedback from SCHEV, the Department of Education, and affected departments, we have made some adjustments to our program proposals. Thank you to everyone who shared their thoughts.

Today I am writing to ask your department’s permission to include the courses listed below on the graduation checksheet for our proposed Career and Technical Education major. The content from these courses meets VDOE licensure competencies in Marketing Education and Business and Information Technology Education. We do not expect more than 8 or 10 students to choose these licensure options each year.

- **BIT 2405 Introduction to Business Statistics, Analytics, & Modeling**
- **BIT 4604 Data Gov, Privacy, Ethics**

Thank you for your time. I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions.
BSE Courses on Education Checksheet

3 messages

Dawn Knight <dknight1@vt.edu>
To: dredwards@vt.edu
Cc: Nancy Bodenhorn <nanboden@vt.edu>, "Dr. Joseph Mukuni" <mjoseph7@vt.edu>

Hello Dr Edwards,
I am currently putting together an undergraduate curriculum committee program proposal for a new Agricultural Education major and I was hoping to get written support from your department allowing us to include BSE 2094 Introduction to Metal Fabrication and BSE 2484 Engine and Power Train Technology on the graduation checksheet.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

PEAP Information
Schedule an Appointment
Like Us on Facebook

404 Wallace Hall (0565)
(540)231-6496 d knight1@vt.edu
Doctoral Candidate: Curriculum and Instruction
NACADA Advising Community Chair: Education Majors
Faculty Adviser: VT Chapters of KDP, SVEA, and AEYC

Edwards, Dwayne <dredwards@vt.edu>
To: "Knight, Dawn" <dknight1@vt.edu>
Cc: "Bodenhorn, Nancy" <nanboden@vt.edu>, "Mukuni, Joseph" <mjoseph7@vt.edu>

Hi Dawn,

I'm happy to support, and I endorse inclusion of BSE 2094 and BSE 2484 on the Agricultural Education major graduation checksheet. I anticipate no additional resources will be required of BSE.

Best regards,

D. Edwards

Dwayne R. Edwards, Ph.D., P.E.
Professor and Department Head
Department of Biological Systems Engineering
200 Seitz Hall | 155 Ag Quad Lane | Blacksburg, VA 24061-0303
Phone: 540-231-1098 | Fax: 540-231-3199 | E-mail: dredwards@vt.edu
Website: https://www.bse.vt.edu/
Dawn Knight <dknight1@vt.edu>

To: Patricia Amateis <pamateis@vt.edu>
Cc: Nancy Bodenhorn <nanboden@vt.edu>

Hello Dr. Amateis,

Thank you for your recent note allowing us to include CHEMs 1015/1025/1016/1026 as Pathways options for our new Agricultural Education major. We have recently added ENSC 3604 which includes CHEM 1035 as a possible prerequisite, so we are hoping to include CHEM 1035 General Chemistry on the graduation checksheet as an additional option. As a reminder, we are expecting 10-15 students per academic year and this course would be one of several options.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Thank you, again!

--

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Patricia Amateis <pamateis@vt.edu>

To: Dawn Knight <dknight1@vt.edu>

Hi Dawn,

The Chemistry Department supports the inclusion of CHEM 1035 General Chemistry as an option on the graduation checksheet for the new Agricultural Education major.

Patricia Amateis
Director of Undergraduate Education
Chemistry

Thank you very much!

[Quoted text hidden]
Dawn: I did see it and thought I had sent the response, but it was in the draft folder. The text is below:

Dawn: We support inclusion of COMM 1015 and 1016 (Communication Skills) and CMST 3214 (Professional Communication) on the proposed Marketing Education major checksheet. Our current capacity for additional students in these courses is limited. We are working to expand that capacity, but with current hiring limits, I’m not sure how soon we might add instructors for these Pathways sections.

We support inclusion of CMST 4214 (Web Content Management Strategies) on the proposed Business and Information Technology Education major checksheet.

Douglas F. Cannon, Ph.D., APR+M, Fellow PRSA
Associate Director, School of Communication
Virginia Polytechnic Institute and State University (Virginia Tech)
Dawn Knight <dknight1@vt.edu>

To: Robert Denton <rdenton@vt.edu>
Cc: Nancy Bodenhorn <nanboden@vt.edu>, "Dr. Joseph Mukuni" <mjoseph7@vt.edu>

Hello Dr. Denton,

I am currently putting together program proposals for Career and Technical Education which includes 4 majors. I was hoping to get written support from your department allowing us to include COMM 2004 as Pathways on graduation checksheets for three of them; Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

Thank you!

--

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Douglas Cannon <dfcannon@vt.edu>

To: Dawn Knight <dknight1@vt.edu>

Dawn: We support the inclusion of COMM 2004: Public Speaking on the Business and Technology Education, Family and Consumer Science Education, and Marketing Education checksheets.

Douglas F. Cannon, Ph.D., APR+M, Fellow PRSA
Assistant Head, Department of Communication
Virginia Polytechnic Institute and State University (Virginia Tech)
Computer Science Courses Required for New Education Majors

Stephen H Edwards <edwards@cs.vt.edu>
To: Dawn Knight <dknight1@vt.edu>
Cc: "Kreye, Bettibel" <bkreye@vt.edu>, Nancy Bodenhorn <nanboden@vt.edu>

OK, thank you for the clarification. At that expected enrollment, the Department of Computer Science approves the inclusion of CS 1054, CS 1044, CS 1114, and CS 1064 (if you decide to add it) in the checksheet for your new Mathematics Education major. Let me know if you need anything else.

-- Steve

Virginia Tech, CS Dept.
2202 Kraft Drive
Blacksburg, VA 24060 USA
(540)-231-5723

Web-CAT: Web-based Center for Software Testing
Automatic grading using student-written tests
http://web-cat.org/
http://people.cs.vt.edu/~edwards/

[Quoted text hidden]
Hello Dr. Tracy,

I am currently putting together an undergraduate curriculum committee program proposal for a new Agricultural Education major and I was hoping to get written support from your department allowing us to include CSES 3114 Soils and CSES 3124 Soils Laboratory on the graduation checksheet.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

--

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Benjamin F. Tracy, PhD
Associate Director of Undergraduate Programs
School of Plant and Environmental Sciences - Virginia Tech
185 Ag. Quad Lane (MC 0404)
Blacksburg, Va 24061
Email: bftracy@vt.edu
Office Ph: 540.231.8259
Sure - that is actually my course. Was kind of wondering why it was included with the others. Thanks!

On Mon, Aug 17, 2020 at 5:29 PM Dawn Knight <dknight1@vt.edu> wrote:

Hello Dr. Tracy,

My apologies, it looks like I missed a CSES course the first time I asked. Could we also include **CSES 2444 Agronomic Crops** on our proposed checksheet for **Agricultural Education** majors?

Thank you!

On Thu, Jul 16, 2020 at 7:53 AM Benjamin F. Tracy <bftracy@vt.edu> wrote:

Hi Dawn -yes, we agree to allow CSES 3114 and 3124 on your checksheet for the new Agriculture Education major.

Regards,

Ben Tracy

On Wed, Jul 15, 2020 at 1:45 PM Dawn Knight <dknight1@vt.edu> wrote:

Hello Dr. Tracy,

I am currently putting together an undergraduate curriculum committee program proposal for a new **Agricultural Education** major and I was hoping to get written support from your department allowing us to include **CSES 3114 Soils** and **CSES 3124 Soils Laboratory** on the graduation checksheet.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else’s responsibility, could you please point me in the right direction?

--

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

---

Benjamin F. Tracy, PhD
Associate Director of Undergraduate Programs
School of Plant and Environmental Sciences - Virginia Tech
ECON courses on Education Checksheets

3 messages

Dawn Knight <dknight1@vt.edu>  Wed, Jul 15, 2020 at 11:48 AM
To: Melanie Fox <melaniefox@vt.edu>
Cc: Nancy Bodenhorn <nanboden@vt.edu>, "Dr. Joseph Mukuni" <mjoseph7@vt.edu>

Hello Dr. Fox,

I am currently putting together undergraduate curriculum committee proposals for Career and Technical Education which includes multiple new majors. I was hoping to get written support from your department allowing us to include ECON 2005 and 2006 as Pathways on graduation checksheets for Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

Thank you!

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Melanie Fox <melaniefox@vt.edu>  Wed, Jul 15, 2020 at 1:17 PM
To: Dawn Knight <dknight1@vt.edu>
Cc: Nancy Bodenhorn <nanboden@vt.edu>, "Dr. Joseph Mukuni" <mjoseph7@vt.edu>

Hi Dawn,

Yes, the department supports adding Econ 2005 and 2006 to these checksheets.

Melanie Fox
Director of Undergraduate Studies, Economics
melaniefox@vt.edu

Ut Prosim

[Quoted text hidden]

Dawn Knight <dknight1@vt.edu>  Wed, Jul 15, 2020 at 2:52 PM
To: Melanie Fox <melaniefox@vt.edu>


List of ELA and Elementary courses and new ELAEd Checksheets

Joe Eska <eska@vt.edu>  
To: Dawn Knight <dknight1@vt.edu>

Hello Dawn,

This all is fine from the perspective of English. Please go ahead. We had spoken about trying to direct the Education majors to more of the linguistics courses, perhaps recommending that students enroll in the Pathways minor in Language Sciences. Have you decided against that?

Thanks,
Joe

On Thu, Jan 23, 2020 at 3:34 PM Dawn Knight <dknight1@vt.edu> wrote:

Hi Dr. Eska,

I am worried that my last email must have been lost in the excitement of the end of fall semester. It is getting close to our deadline for submitting our degree proposals so I am reaching out for English department approval to include specific courses on our checksheets for Secondary English Education and Elementary Education. Below is the list of courses we discussed at our meeting in November. I made the suggested changes to the proposed checksheets and I have attached them. I am also told that an email reply is sufficient to submit. Thank you so much.

Secondary English

Pathways:
- ENGL 1105 First-Year Writing
- ENGL 1106 First-Year Writing
- ENGL 2744 Intro to Creative Writing
- ENGL/WGS 3134 Gender and Linguistics
- ENGL/RLCL/SOC 3144 Language and Ethnicity in the US
- ENGL 4164 Shakespeare

Major Requirements:
- ENGL 2604 Introduction to Critical Reading
- ENGL 2534 American Literary History
- ENGL 2544 British Literary History
- ENGL 3324 Acts of Interpretation
- ENGL 3514 Ethnic Literature for Children
- ENGL 3694 Topics in World Novels
- ENGL 3734 Community Writing
- ENGL 4054 History of the English Language

Restricted Electives (select from these choices):
- ENGL 3315 Playwriting
- ENGL 3714 Creative Writing: Poetry
- ENGL 3764 Technical Writing
- ENGL 3704 Creative Writing: Fiction
- ENGL 3724 Creative Writing: Creative Non-Fiction
- ENGL 3804 Technical Editing and Style
- ENGL/AFST 2644 Intro to African Amer. Literature
- ENGL 3364 Topics in Literature by Women
- ENGL 3624 Appalachian Literature
- ENGL/AINS 2804 Contemporary Native American Literature
- ENGL 3514 Ethnic Literature for Children
- ENGL 3654 Ethnic American Literature

Elementary Education, we are asking for the following courses to be included as Pathways requirements:
- ENGL 1105 First-Year Writing
- ENGL 1106 First-Year Writing

On Thu, Dec 5, 2019 at 1:41 PM Dawn Knight <dknight1@vt.edu> wrote:

Hi Dr Eska,
Hi Laura,

I am currently putting together program proposals for Career and Technical Education which includes 4 majors; Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. I was hoping to get written support from your department allowing us to include ENGL 1105 and 1106 as Pathways on our graduation checksheets.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

Thank you!

--

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Derek Mueller <dmueller@vt.edu>  
To: "Knight, Dawn" <dknight1@vt.edu>  
Cc: "Bodenhorn, Nancy" <nanboden@vt.edu>, "Ferguson, Laura" <lauraf92@vt.edu>, "Mukuni, Joseph" <mjoseph7@vt.edu>, "Mooney, Jennifer" <jenmoon@vt.edu>  

Hi Dawn,

Yes, please do go ahead and list ENGL1105 and ENGL1106 on your check sheets. Both classes are approved for Pathways Discourse. If you would like to have any additional information about those courses (e.g., curriculum maps or sample syllabi), let me know, and I will provide them.

All the best,

Derek
Hi Dawn,

In that case yes, please feel free to list Writing and Digital Media on the Business and Information Technology Education major checksheet.

All the best,
Jennifer

On Fri, Jul 31, 2020 at 11:47 AM Dawn Knight <dknight1@vt.edu> wrote:
Of course,
We expect between 5 and 10 students per year at most. We currently have only 1 or 2 come into the grad program. We hope offering it at the undergrad level will increase interest but it will not be huge numbers.

On Fri, Jul 31, 2020 at 10:57 AM Jennifer Sano-Franchini <sanojenn@vt.edu> wrote:
Thanks, Derek, for looping me in.

Dawn, do you know how many students are in the major and about how many would be taking Writing and Digital Media each term? Would it be a required course? Just want to make sure we have enough sections available and folks to teach them.

All the best,
Jen

On Thu, Jul 30, 2020 at 2:50 PM Derek Mueller <dmueller@vt.edu> wrote:
Hi Dawn,

I'm not the best person for addressing the check sheet status of that particular class, since it is a course in the department's core and also in the Professional and Technical Writing Program, which Jen Sano-Franchini directs. I've cc'd her on this message so she can confirm our interest in having that class listed for Business and Information Technology Majors.

All the best,
Derek

On Thu, Jul 30, 2020 at 2:45 PM Dawn Knight <dknight1@vt.edu> wrote:
Thank you.
Are you also the person to ask about ENGL 3844 Writing and Digital Media? It appears to be a good match for our Business and Information Technology Education majors.

On Thu, Jul 30, 2020 at 1:06 PM Derek Mueller <dmueller@vt.edu> wrote:
Hi Dawn,

Yes, we are in support of having ENGL1105 and ENGL1106 listed on the Mathematics Education advising/graduation checksheets.

All the best,
Derek

On Thu, Jul 30, 2020 at 12:14 PM Dawn Knight <dknight1@vt.edu> wrote:
Hi Derek,
Request to Include HORT and ENSC Courses on Education Checksheet

Dawn Knight <dknight1@vt.edu>
To: “Benjamin F. Tracy” <bftracy@vt.edu>
Cc: Nancy Bodenhorn <nanboden@vt.edu>

Tue, Jul 28, 2020 at 3:57 PM

Hello Dr. Tracy,

Thank you for the recent note allowing us to include CSES courses on our new Agricultural Education graduation checksheet. We have received some feedback about the content required by VDOE to approve our licensure program and I am reaching out to ask for support for additional courses within your department.

I am hoping to get written support from your department allowing us to include the following:

- HORT 2164 FloralDesign
- HORT 2224 Horticulture Science and Industry
- ENSC 1015 Foundations of Environmental Science
- ENSC 3604 Fundamentals of Environmental Science

I am told that if you are willing to agree, an email response to that effect is sufficient.

Also, in order to be an approved educator preparation program, we are required to submit documentation to the VDOE. Based on the catalog descriptions, I believe these courses would benefit our students so I am also requesting recent syllabi to document the content covered.

Thank you!

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Benjamin F. Tracy <bftracy@vt.edu>
To: Dawn Knight <dknight1@vt.edu>
Cc: Nancy Bodenhorn <nanboden@vt.edu>

Thu, Jul 30, 2020 at 1:09 PM

Yes, I agree to the inclusion of these courses in the proposed curriculum. Let me know if you need anything else.

Thanks!

[Quoted text hidden]
FIN Courses on Education Checksheet

3 messages

Dawn Knight <dknight1@vt.edu>  Wed, Jul 15, 2020 at 2:41 PM
To: vs@vt.edu
Cc: Nancy Bodenhorn <nanboden@vt.edu>, "Dr. Joseph Mukuni" <mjoseph7@vt.edu>

Hello Dr. Singal,
I am currently putting together an undergraduate curriculum committee program proposal for a new Business and Information Technology Education major and I was hoping to get written support from your department allowing us to include FIN 3054 Legal and Ethical Environment of Business and FIN 3124: Financial Planning for Professionals on the graduation checksheet.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Vijay Singal <singal@vt.edu>  Wed, Jul 15, 2020 at 3:13 PM
To: Dawn Knight <dknight1@vt.edu>
Cc: Nancy Bodenhorn <nanboden@vt.edu>, "Dr. Joseph Mukuni" <mjoseph7@vt.edu>, "Russell, Robin" <rrussell@vt.edu>, Crystal Haun<crystaldawn@vt.edu>

Hello Dawn:
Yes, the Finance department will allow students from the new major to take FIN 3054 and FIN 3124. No additional resources are required. However, I hope you are aware that the major, Business and Information Technology, already exists in the Pamplin College of Business. I don't know whether adding "Education" is sufficiently distinctive.

Vijay

Vijay Singal
Department Head of Finance and J Gray Professor of Finance
Virginia Tech, vs@vt.edu
540-231-7750 (d), 540-231-5904 (o), 540-818-4089 (c)
FIN Courses on Education Checksheet

Vijay Singal <singal@vt.edu>  
To: Dawn Knight <dknight1@vt.edu>  
Thu, Aug 6, 2020 at 10:25 PM

Dawn:

The Finance department has no objection to your adding FIN 2114 as a course for the BIT Education checksheet. No additional resources are needed. Please note that this course is also a Pathways 5f course (CLE Area 5).

Vijay

Vijay Singal  
Department Head of Finance and J Gray Professor of Finance  
Virginia Tech, vs@vt.edu  
540-231-7750 (d), 540-231-5904 (o), 540-818-4089 (c)
Nancy,

We are happy to have FREC 2004 Forest Ecosystems included on the Ag Education major checksheet. However, we are unwilling to allow FREC 3004 Environmental Informatics to be included, because it is a major cohort course for our Environmental Informatics major, and we believe having more than a small number of other majors who are not wholly invested in the topic would be disruptive to the aims of the course. Also, we are seeking to add prerequisites to the course, to make sure the students have sufficient background in calculus and data analysis needed to be successful in this course. We don't believe that the course would be suitable for Ag Education students going forward.

I'm sorry for the delay, as I sought input from our faculty involved in these courses and our majors.

Jay

Jay Sullivan
Professor and Department Head
Department of Forest Resources and Environmental Conservation
College of Natural Resources and Environment
Virginia Tech
jsulliv@vt.edu, 540-231-4356
Request to Include additional FREC Courses on Education Checksheet

Dawn Knight <dknight1@vt.edu>  
To: Jay Sullivan <jsulliv@vt.edu>  
Cc: Nancy Bodenhorn <nanboden@vt.edu>

Hello Dr. Sullivan,

Thank you for the recent note allowing us to include FREC 2004 on our new Agricultural Education graduation checksheet. Also for the heads up about FREC 3004 not being appropriate for our program. Based on further exploration, I believe these courses would better meet our needs.

FREC 1004 Digital Planet  
FREC 2554 Leading Global Sustainability  

I am told that if you are willing to provide written support for these, an email response to that effect is sufficient.

Thanks again!

--

Dawn Knight-Withers, MAEd  
Pre-Education Advising Coordinator, Virginia Tech School of Education

Jay Sullivan <jsulliv@vt.edu>  
To: Dawn Knight <dknight1@vt.edu>  
Cc: Nancy Bodenhorn <nanboden@vt.edu>

Dawn,

We are willing to have FREC 1004 Digital Planet and FREC 2554 Leading Global Sustainability included on the Agricultural Education checksheet as restricted electives. Please be aware that these courses often fill up, so we may have to place priority on the enrollment of our own students. Where adequate room exists, we would be happy to have your students in those courses.

Jay

Jay Sullivan  
Professor and Department Head  
Department of Forest Resources and Environmental Conservation  
College of Natural Resources and Environment  
Virginia Tech  
jsulliv@vt.edu, 540-231-4356
Hello Dr. Crawford,

I apologize for having to ask you to do this a second time, however, while we were completing our curriculum matrices for the VDOE, we realized there were changes to the competencies for certain teacher licensure areas. Dr. Hicks has made changes to the checksheet to cover the new competencies and I am writing to ask for a new letter of support allowing us to list courses from your department on our graduation checksheet for the History and Social Sciences Education major.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Pathways and Restricted Electives
- GEOG 1014 World Regions (as Pathways)
- GEOG 1084 (FREC 1004): Digital Planet (as Pathways)
- GEOG 1104 Introduction to Physical Geography
- GEOG 1004 Introduction to Human Geography
- GEOG 2314: Maps and Mapping

Please let me know if you have any questions and, as always, thank you for your time.

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

With this email I am stating my support for inclusion of Geography courses in your proposed checksheet stated in your email below.

Sincerely,

Tom Crawford

Tom Crawford, PhD
Department Chair & Professor
Department of Geography
(540) 231-7216 | tomc3@vt.edu
Dawn Knight <dknight1@vt.edu>  

Hello Dr. Crawford,

Thank you for the email supporting our inclusion of other GEOG courses. As you know, I am putting together a program proposal for a new undergraduate History and Social Sciences Education major and I am now requesting written support allowing us to include PSCI/GEOG/IS 2064: The Global Economy and World as a Pathways course on our graduation checksheet.

Because the course is cross-listed, folks in PSCI have suggested that I verify with you, as well. I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions and thank you for your time.

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

404 Wallace Hall (0565)
(540)231-6496 dknight1@vt.edu
Doctoral Candidate: Curriculum and Instruction
NACADA Advising Community Chair: Education Majors
Faculty Adviser: VT Chapters of KDP, SVEA, and AEYC

Crawford, Tom <tomc3@vt.edu>  

Dawn,

With this email I agree to include the course GEOG 2064 The Global Economy and World in your proposed major. This course is not taught by a Geography faculty but is crosslisted under the GEOG prefix.

Sincerely,

Tom Crawford

Tom Crawford, PhD
Department Chair & Professor
Department of Geography
Dear Dr. Shadle,

I apologize for having to ask you to do this a second time, however, while we were completing our curriculum matrices for the VDOE, we realized there were changes to the competencies for certain teacher licensure areas. Dr. Hicks has made changes to the checksheet to cover the new competencies and I am writing to ask for a new letter of support allowing us to list courses from your department on our graduation checksheet for the History and Social Sciences Education major.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Pathways and Restricted Electives
- HIST 1115 History of the United States (as Pathways)
- HIST 1116 History of the United States (as Pathways)
- HIST 2004 Historical Methods (or PSCI 2024)
- HIST 3205 or 3206 History of US South or HIST 3224 History of Virginia
- HIST 1215 Intro to World History
- HIST 1216 Intro to World History
- HIST 3114 History of Capitalism (or PSCI 2064)

Depth Electives (students will select two)
- HIST 2275/2276 African-American History
- HIST 3144: American Environmental History
- HIST 3564: The Cold War
- HIST 1515 or 1516 History of Africa I or II
- HIST 2104 Topics and Critical Issues in U.S. History
- HIST 2114 Topics Critical Issues in European History
- HIST 2124 Topics Critical Issues in World History
- HIST 2345 History of the Middle East
- HIST 2355 History of China
- HIST 2364 History of Japan
- HIST 2384 Ghandi and Modern India
- HIST 2715 History of Technology
- HIST 3004 Colonial America
- HIST 3014 The American Revolution
- HIST 3054 American Civil War
- HIST 3064 Emergence of Modern America
- HIST 3084 Recent America
- HIST 3234 The North American West
- HIST 3304 The World of Alexander the Great
- HIST 3334 The Renaissance
- HIST 3344 The Era of Reformation
- HIST 3364 Age of Revolution and Napoleon
- HIST 3544 World War II
- HIST 3554 Age of Globalization
- HIST 3714 War and Medicine
- HIST 3774 Digital History

Please let me know if you have any questions and, as always, thank you for your time.

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Brett Shadle <shadle@vt.edu>
Thu, Jul 30, 2020 at 2:09 PM
To: Dawn Knight <dknight1@vt.edu>
Cc: David Hicks <hicks@vt.edu>, Nancy Bodenhorn <nanboden@vt.edu>, Heath Furrow <hafurrow@vt.edu>

Hi Dawn,

History is fine with you listing these courses on the checksheet.

Thanks
Brett
Hi Brett,
Me again :). The School of Education would like to include HIST 2604 Intro Data in Social Context as a Pathways course for Family and Consumer Sciences Education majors. We expect fewer than 10 students per year, and this would be one of three options for concept 5f.
Thank you.

--

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Hi Dawn,
The History Department is fine with 2604 being added to the checksheet.

Thanks
Brett

*Tutelo/Monacan people are the traditional custodians of this land
Renee and Nancy,

Thanks for including me in this email trail. As an FYI, CLAHS has informed our department that we have to continue admitting students to the FCS program for the remainder of this year until it can be formally taken off the books. We will then implement a wrap-up plan for the enrolled students, which shouldn't be hard because none of the classes we offer in that program are going away. We are in full support of your program and will be happy to do anything we can to help through this period of transition.

Best,

Dustin

On Thu, Aug 20, 2020 at 3:10 PM Eaton, Renee <rselberg@vt.edu> wrote:

Hi Nancy,

At the HNFE Faculty meeting today, the vote passed to include HNFE 1004 on the checksheet for the new Family and Consumer Sciences Education program. Please accept this email as our support for this program.

Renee

Renee S. Eaton, MS, MS, LAT
Undergraduate Program Director and Advanced Instructor
Human Nutrition, Foods and Exercise
295 West Campus Drive
Blacksburg VA 24061
540.231.5987 r.eaton@vt.edu
Hello Dr. McGehee,

I am putting together undergraduate curriculum committee program proposals for new Education majors and I was hoping to get written support from your department allowing us to include courses on our graduation checksheets. Currently we are submitting proposals for Career and Technical Education which includes four proposed majors; Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. The following have requested permission to include courses from your department on graduation checksheets.

I am told that if you are willing to agree, an email reply to that effect is sufficient.

Agricultural Education
HTM 3424 Events Management (as Pathways Requirement)

Business and Information Technology Education
HTM 3424 Events Management (as Pathways Requirement)

Family and Consumer Sciences Education
HTM 3414 Food Preparation, Purchasing and Management

Marketing Education
HTM 3424 Events Management (as Pathways Requirement)

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction? Thank you for your time.

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

McGehee, Nancy <nmcgehee@vt.edu>
To: "Knight, Dawn" <dknight1@vt.edu>
Cc: "Bodenhorn, Nancy" <nanboden@vt.edu>, "Mukuni, Joseph" <mjoseph7@vt.edu>

Thanks for your patience, Dawn,

Yes, I approve and agree with this change.

Nancy

Nancy G McGehee
Professor and Head
Howard Feiertag Department of Hospitality and Tourism Management
Pamplin College of Business
Hello Dawn,

I approve.

Nancy

From: Dawn Knight <dknight1@vt.edu>
Sent: Thursday, August 6, 2020 10:04 PM
To: McGehee, Nancy <nmcgehee@vt.edu>
Subject: Re: HTM Courses on Education Checksheets

Hello again Dr. McGehee,
We have been revising our proposals based on feedback and would like to add HTM 2314 Introduction to International Business to our BIT Education checksheet.

Thank you for your time,

Dawn

On Fri, Jul 17, 2020 at 12:35 PM McGehee, Nancy <nmcgehee@vt.edu> wrote:

Thanks for your patience, Dawn,

Yes, I approve and agree with this change.

Nancy

Nancy G McGehee
Professor and Head
Howard Feiertag Department of Hospitality and Tourism Management
Pamplin College of Business
540 231 1201
Hi Nancy,

The courses will be required, but these are anticipated to be the same students who currently take these as prerequisites to our graduate program. We are shifting the licensure program to an undergraduate model and anticipate roughly 10-15 per year.

On Wed, Jul 15, 2020 at 6:00 PM McGehee, Nancy <nmcgehee@vt.edu> wrote:

Hello Dawn –

Thanks for reaching out. Can you provide some additional information? Are these courses going to be required or would they be part of a suite of options? About how many students would we expect to take on?

Thanks much,

Nancy

Hello Dr. McGehee,

I am putting together undergraduate curriculum committee program proposals for new Education majors and I was hoping to get written support from your department allowing us to include courses on our graduation checksheets. Currently we are submitting proposals for Career and Technical Education which includes four proposed majors; Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. The following have requested permission to include courses from your department on graduation checksheets.
August 11, 2020

Nancy Bodenhorn
Associate Director, Office of Academic Programs
Associate Professor, Counselor Education
404 Wallace Hall
School of Education
Virginia Tech

Dear Professor Bordenhorn:

The Department of Mathematics supports the School of Education proposals for Secondary Math Education as well as Career and Technical Education which includes four majors; Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. The following MATH courses are included:

**Secondary Mathematics Education**
- MATH 1225 Calculus of a Single Variable (as Pathways)
- MATH 1226 Calculus of a Single Variable (as Pathways)
- MATH 3054 Programming for Mathematical Problem Solving (1 of 4 options for Computer Programming)
- MATH 1004 Discovering Mathematics I
- MATH 1044 Discovering Mathematics II
- MATH 2114 Introduction to Linear Algebra
- MATH 2204 Introduction to Multivariable Calculus
- MATH 3034 Introduction to Proofs
- MATH 3124 Modern Algebra MATH
- 4044 History of Mathematics MATH
- 4334 College Geometry
- MATH 4625 Mathematics for Secondary Teachers
- MATH 4626 Mathematics for Secondary Teachers
- MATH 3224 Advanced Calculus

**Career and Technical Education (Business and Information Technology and Marketing)**
- MATH 1524 Business Calculus (as Pathways and pre-req)

We expect to be able to teach these courses with no new recourses.

Best regards,

Robert C. Rogers
Professor and Associate Chair
MGT Courses on Education Checksheets
5 messages

Dawn Knight <dknight1@vt.edu>  
To: devi@vt.edu  
Cc: Nancy Bodenhorn <nanboden@vt.edu>, "Dr. Joseph Mukuni" <mjoseph7@vt.edu>

Hello Dr. Gnyawali,

I am putting together undergraduate curriculum committee program proposals for new Education majors and I was hoping to get written support from your department allowing us to include courses on our graduation checksheets. Currently we are submitting proposals for Career and Technical Education which includes four proposed majors; Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. The following have requested permission to include courses from your department on graduation checksheets.

Business and Information Technology Education
- MGT 3444 Multicultural Diversity in Organizations (as Pathways Requirement)
- MGT 3304 Management Theory and Leadership Practice

Family and Consumer Sciences Education
- MGT 3444 Multicultural Diversity in Organizations (as Pathways Requirement)

Marketing Education
- MGT 3444 Multicultural Diversity in Organizations (as Pathways Requirement)

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction? Thank you for your time.

--

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Gnyawali, Devi <devi@vt.edu>  
To: "Knight, Dawn" <dknight1@vt.edu>  
Cc: "Bodenhorn, Nancy" <nanboden@vt.edu>, "Mukuni, Joseph" <mjoseph7@vt.edu>

Thank you for the explanation. With the expected enrollments you noted, you have my approval to include MGT 3444 in the checksheets.

Devi

From: Dawn Knight <dknight1@vt.edu>  
Sent: Friday, July 17, 2020 10:30 AM  
To: Gnyawali, Devi <devi@vt.edu>  
Cc: Bodenhorn, Nancy <nanboden@vt.edu>; Mukuni, Joseph <mjoseph7@vt.edu>  
Subject: Re: MGT Courses on Education Checksheets

Only three of the four have requested MGT 3444 as a Pathways requirement, and combined I would expect those to include fewer than 10-15 students per year based on current numbers. Of the four CTE majors, Ag Ed is the largest and they utilize a different diversity-focused course.
On Thu, Jul 16, 2020 at 5:58 PM Gnyawali, Devi <devi@vt.edu> wrote:

Please let me know expected enrollments in each of the four proposed majors. Do you really want/need the same course for all?

Best regards

Devi R. Gnyawali, Ph.D.
Department Head and R. B. Pamplin Professor
Department of Management (mail code 0233), 2007 Pamplin Hall
880 West Campus Drive, Blacksburg, VA 24061
Email: devi@vt.edu
Phone: 540-231-6353
https://management.pamplin.vt.edu/directory/gnyawali-devi.html

Dawn Knight <dknight1@vt.edu> Fri, Jul 17, 2020 at 12:34 PM
To: “Gnyawali, Devi” <devi@vt.edu>
Cc: “Bodenhorn, Nancy” <nanboden@vt.edu>, “Mukuni, Joseph” <mjoseph7@vt.edu>

Thank you! And also MGT 3304 Management Theory and Leadership Practice only for the BIT majors (5-ish per year)?

Gnyawali, Devi <devi@vt.edu> Fri, Jul 17, 2020 at 12:48 PM
To: “Knight, Dawn” <dknight1@vt.edu>

Sure, that will be fine. We have capacity in MGT 3304

Best regards

Devi

Devi R. Gnyawali, Ph.D.
Department Head and R.B. Pamplin Professor of Management
2007 Pamplin Hall, Department of Management, Virginia Tech

On Jul 17, 2020, at 12:35 PM, Dawn Knight <dknight1@vt.edu> wrote:

Dawn Knight <dknight1@vt.edu> Fri, Jul 17, 2020 at 12:57 PM
To: “Gnyawali, Devi” <devi@vt.edu>

Great, thanks!

[Quoted text hidden]
Sure, you have my approval to include MGT 3304 to the checksheet.

Thank you

Devi

From: Dawn Knight <dknight1@vt.edu>
Sent: Monday, August 10, 2020 5:30 PM
To: Gnyawali, Devi <devi@vt.edu>
Subject: Re: MGT Courses on Education Checksheets

Hello Again Dr. Gnyawali,

It appears as though the Marketing Education majors could also benefit from the course MGT 3304 Management Theory and Leadership Practice. We do not expect more than 3 or 4 students to choose this option. Would it be OK to add this course to our Marketing Education checklist as well?

On Fri, Jul 17, 2020 at 12:48 PM Gnyawali, Devi <devi@vt.edu> wrote:

Sure, that will be fine. We have capacity in MGT 3304

Best regards

Devi

Devi R. Gnyawali, Ph.D.

Department Head and R.B. Pamplin Professor of Management

2007 Pamplin Hall, Department of Management, Virginia Tech

On Jul 17, 2020, at 12:35 PM, Dawn Knight <dknight1@vt.edu> wrote:
MGT Courses on Education Checksheets

Gnyawali, Devi <devi@vt.edu>  
To: "Knight, Dawn" <dknight1@vt.edu>  
Fri, Aug 7, 2020 at 9:56 AM

Hi Dawn,

You have my permission to include MGT 2064 to the list. At this point I cannot allow inclusion of MGT 1104 due to capacity constraints. Thank you

Devi

From: Dawn Knight <dknight1@vt.edu>
Sent: Thursday, August 6, 2020 9:36 PM
To: Gnyawali, Devi <devi@vt.edu>
Subject: Re: MGT Courses on Education Checksheets

Hello again, Dr. Gnyawali,

We have been working on some feedback regarding our proposed majors and would like to ask for permission to also include MGT 1104 Foundations of Business and MGT 2064 Foundations of Entrepreneurship on our Business and Information Technology Education major checksheet.

I would also like to ask if there is a contact in the School of Business who could provide some feedback on our Marketing Ed and BIT Ed proposals. We think it is important to work closely with the faculty who provide students with their content courses.

On Fri, Jul 17, 2020 at 12:34 PM Dawn Knight <dknight1@vt.edu> wrote:

Thank you! And also MGT 3304 Management Theory and Leadership Practice only for the BIT majors (5-6 per year)?

On Fri, Jul 17, 2020 at 12:27 PM Gnyawali, Devi <devi@vt.edu> wrote:

Thank you for the explanation. With the expected enrollments you noted, you have my approval to include MGT 3444 in the checksheets.

Devi
Hello Dr. Bagchi,

I am putting together undergraduate curriculum committee program proposals for new Education majors and I was hoping to get written support from your department allowing us to include courses on our graduation checksheets. Currently we are submitting proposals for Career and Technical Education which includes four proposed majors: Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. The following have requested permission to include courses from your department on graduation checksheets.

I am told that if you are willing to agree, an email reply to that effect is sufficient.

Marketing Education
- MKTG 3104 Marketing Management
- MKTG 3504 Principles of Advertising
- MKTG 4204 Consumer Behavior
- MKTG 4604 Retail Management
- MKTG 4554 Relationships Among Buyers & Sellers
- MKTG 4704 International Marketing
- MKTG 4774 Advanced Professional Selling

Business and Information Technology Education
- MKTG 3104 Marketing Management

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction? Thank you for your time.

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

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Bagchi, Rajesh <rbagchi@vt.edu>
To: "Knight, Dawn" <dknight1@vt.edu>
Cc: "Bodenhorn, Nancy" <nanboden@vt.edu>, "Mukuni, Joseph" <mjoseph7@vt.edu>, "Blankenship, Misty" <jeblanke@vt.edu>

Hello Dawn,

Yes, I approve this. Thank you.

Best regards,
Rajesh

[Quoted text hidden]
Hello Dr. Pitt,
I am putting together a program proposal for a new undergraduate Family and Consumer Sciences Education major and I was hoping to get written support from the Department of Philosophy allowing us to include PHIL 2304 Global Ethics as a Pathways course on our graduation checksheet.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions and thank you for your time.

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Hi Dawn,

I am delighted you want to include PHIL 2304 on your graduation check sheet for your new major. We certainly support it.

Best wishes,

Joe
Hi Dawn,

No questions, happy to support.

Joe

**********************************************************************

Joseph C. Pitt
Professor of Philosophy & STS
ASPECT Affiliate
Director of Undergraduate Studies
Department of Philosophy
Virginia Tech

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From: Dawn Knight <dknight1@vt.edu>
Date: Thursday, August 6, 2020 at 9:29 PM
To: Pitt Cell <jcpitt@vt.edu>
Subject: Re: Request to include PHIL course on Family and Consumer Sciences Education Checksheet

Thank you, Dr. Pitt!

I have also been working on other Career and Technical Education majors and would appreciate support for the following: Business and Information Technology Education would like to include PHIL 2304 Global Ethics and Marketing Education would like to include PHIL 4324 Bus and Prof Ethics. Please let me know if you have any questions and thank you for your time.

On Fri, Jul 31, 2020 at 4:00 PM Pitt, Joseph <jcpitt@vt.edu> wrote:

Hi Dawn,

I am delighted you want to include PHIL 2304 on your graduation check sheet for your new major. We certainly support it.

Best wishes,
Joe
Hello Dr. Luke,

I apologize for having to ask you to do this a second time, however, while we were completing our curriculum matrices for the VDOE, we realized there were changes to the competencies for certain teacher licensure areas. Dr. Hicks has made changes to the checksheet to cover the new competencies and I am writing to ask for a new letter of support allowing us to list courses from your department on our graduation checksheet for the History and Social Sciences Education major.

I am told that if you are willing to agree, an email response to that effect is sufficient.

**Pathways and Restricted Electives**

- PSCI/ECON/PHIL 2894 Introduction Philosophy, Politics, and Economics (as Pathways)
- PSCI/GEOG/IS 2064: The Global Economy and World (as Pathways)
- PSCI 1014 Intro to US Government and Politics (as Pathways)
- PSCI 2024 Research Methods in Political Science (or HIST 2004)

**Depth Electives**

- PSCI/IS 1024 Introduction to Comparative Government and Politics
- PSCI 3424 State and Local Government
- PSCI 3334 Judicial Process
- PSCI 2014 Introduction to Political Theory
- PSCI/PHIL 3015/3016 Political Theory

Please let me know if you have any questions and, as always, thank you for your time.

--

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

---

I believe that I responded last year in November and December. All of the IS and PSCI courses are acceptable for us to included in the your check sheets, but I believe you will need to get confirmations on the cross-listed courses from ECON, GEOG and PHIL.

Those courses are:

- PSCI/ECON/PHIL 2894 Introduction Philosophy, Politics, and Economics (as Pathways)
- PSCI/GEOG/IS 2064: The Global Economy and World (as Pathways)
- PSCI/PHIL 3015/3016 Political Theory

I agree that these IS and PSCI options would be good to include in your updated check sheets.
Best,

Tim Luke

On Thu, Aug 6, 2020 at 3:44 PM Dawn Knight <dknight1@vt.edu> wrote:

Hi Dr. Luke,
Did you receive my request? I can't find a reply.

Dawn Knight <dknight1@vt.edu> Thu, Aug 6, 2020 at 4:01 PM
To: Timothy Luke <twluke@vt.edu>

We made some changes so I needed an updated OK from you guys. Thank you so much, I appreciate it :)
Request to include PSYC course on Education checksheet

Roseanne Foti <rfoti@vt.edu>
To: Dawn Knight <dknight1@vt.edu>
Sun, Aug 23, 2020 at 12:59 PM

Hello Dawn,

I approve of the inclusion of PSYC 2034: Developmental Psychology as an option.

Take care, Roseanne

Roseanne J. Foti, Ph.D.
Chair, Department of Psychology
Virginia Tech
540.231.5814 (voice)
rfoti@vt.edu

Please note: due to my personal family/work balance, I often email outside of normal working hours. Do not feel any pressure to respond outside of your own working pattern.

From: Dawn Knight <dknight1@vt.edu>
Sent: Thursday, August 20, 2020 10:02 PM
To: Roseanne Foti <rfoti@vt.edu>
Subject: Request to include PSYC course on Education checksheet

Hello Dr. Foti,

Thank you again, for allowing us to include your course on our Elementary Education checksheet last fall. Today I am writing to ask if we could also include PSYC 2034: Developmental Psychology as an option on our proposed Career and Technical Education major; Family and Consumer Sciences Education option checksheet. We do not anticipate more than 4 or 5 students to choose this licensure option each year, but for those who do, the content in your course meets VDOE licensure competencies.

Take care!

--

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education
Hello again Dr. Gabriele,
I am putting together a program proposal for a new undergraduate Family and Consumer Sciences Education major and I was hoping to get written support from the Department of Religion and Culture allowing us to include RLCL/WGS/AFST 2204 Race & Gender in Religion & Culture as a Pathways course on our graduation checksheet.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions and thank you for your time.

--
Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Matthew Gabriele <gabriele@vt.edu>
To: Dawn Knight <dknight1@vt.edu>
Cc: Nancy Bodenhorn <nanboden@vt.edu>

Dawn,

Thanks for the note. The Dept. of Religion and Culture would be happy for RLCL/WGS/AFST 2204 to be included in your checksheet. This will require no new resources. Please let me know if you have any questions.

Best,
Matt Gabriele

--
Matthew Gabriele
Professor of Medieval Studies
Chair, Dept. of Religion & Culture
Virginia Tech
he/ him/ his
e: gabriele@vt.edu
p: +1.540.231.1618
http://profgabriele.com/
http://drinkinghistorians.com/

[Quoted text hidden]
Request to include RLCL course on History and Social Sciences Education Checksheet

2 messages

Dawn Knight <dknight1@vt.edu> Thu, Jul 23, 2020 at 10:14 PM
To: Matthew Gabriele <gabriele@vt.edu>
Cc: David Hicks <hicks@vt.edu>, Nancy Bodenhorn <nanboden@vt.edu>

Hello Dr. Gabriele,

I am putting together a program proposal for a new undergraduate History and Social Sciences Education major and I was hoping to get written support from the Department of Religion and Culture allowing us to include RLCL 1214: Medieval World as an elective on our graduation checksheet.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions and thank you for your time.

--
Dawn Knight-Whites, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Matthew Gabriele <gabriele@vt.edu> Fri, Jul 24, 2020 at 8:24 AM
To: Dawn Knight <dknight1@vt.edu>
Cc: David Hicks <hicks@vt.edu>, Nancy Bodenhorn <nanboden@vt.edu>

Dawn,

Thanks for your email. The Department of Religion and Culture is happy to have RLCL 1214 included on this checksheet. It will require no new resources. Please let me know if you need anything else.

Best,
Matt Gabriele

--
Matthew Gabriele
Professor of Medieval Studies
Chair, Dept. of Religion & Culture
Virginia Tech
he/ him/ his
Request to Include SBIO Course on Education Checksheet

Dawn Knight <dknight1@vt.edu>  
To: garnandd@vt.edu  
Cc: Nancy Bodenhorn <nanboden@vt.edu>

Hello Debbie,

I am currently putting together an undergraduate curriculum committee program proposal for a new Agricultural Education major and I was hoping to get written support from your department allowing us to include SBIO 2614 Introduction to Forest Products Marketing on the graduation checksheet to cover required licensure content in the area of "Production and management of the forest." We are expecting 10-15 students per year to select this option.

I am told that if you are willing to agree, an email response to that effect is sufficient.

Also, as an approved educator preparation program, we are required to submit documentation to the VDOE. Based on the catalog descriptions, I believe this course would benefit our students so I am also requesting recent syllabi to document the content covered.

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction?

Thank you!

Dawn Knight-Withers, MAEd  
Pre-Education Advising Coordinator, Virginia Tech School of Education

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Ching-Hsun May Huang, Ph.D.  
Department Head and Professor  
Department of Sustainable Biomaterials

Huang, Ching-Hsun <chinghuang@vt.edu>  
To: "Bush, Robert" <rbush@vt.edu>  
Cc: "Knight, Dawn" <dknight1@vt.edu>

Dear Dawn,

I am glad that Dr. Bush's class will be included in the Agricultural Education curriculum. Students will definitely benefit from his knowledge and expertise. I approve this request and please let me know if there is a form I need to sign.

Thank you.

Best wishes,

Ching

Ching-Hsun May Huang, Ph.D.  
Department Head and Professor  
Department of Sustainable Biomaterials
Hello, Dawn.

If it is fewer than 10 students per year, we would enjoy having Family and Consumer Sciences Education majors in SOC 2104 and agree to it being included as an Pathways option for the major. The only issue for having more is that this course will be required of our majors beginning next year, so there will be high demand. Please let me know if you need anything further at this time. Good luck with your proposal.

Best,

Jim

James Hawdon
Professor
Interim Chair, Department of Sociology
Director, Center for Peace Studies and Violence Prevention
Virginia Tech
495 Old Turner St.
205a Norris Hall
Blacksburg, Virginia 24061

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From: Dawn Knight [mailto:dknight1@vt.edu]
Sent: Tuesday, August 4, 2020 2:41 PM
To: Hawdon, James <hawdonj@vt.edu>
Cc: Bodenhorn, Nancy <nanboden@vt.edu>
Subject: Request to Include SOC course on FCS Checksheet

Hello Dr. Hawdon,

The School of Education would like to include SOC 2104 Quantitative Community Research as a Pathways course for Family and Consumer Sciences Education majors. We expect fewer than 10 students per year, and this would be one of two options for concept 5f.

I am told that if you are willing to agree, an email response to that effect is sufficient.
Please let me know if you have any questions or, if this is someone else's responsibility could you please point me in the right direction?

Thank you!

--

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education
Permission to include SOC prerequisites on checksheet

Hello, Dawn.

The Department of Sociology is pleased to have SOC 1004 Introduction to Sociology and SOC 2014 Sociology of Intimate Relationships included on the Career and Technical Education Major, in the Family and Consumer Sciences Option. We understand these courses will be included on the checksheet, and no new resources will be needed to accommodate these new students.

Best,

James Hawdon
Professor
Interim Chair, Department of Sociology
Director, Center for Peace Studies and Violence Prevention
Virginia Tech
495 Old Turner St.
205a Norris Hall
Blacksburg, Virginia 24061

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From: Dawn Knight [mailto:dknight1@vt.edu]
Sent: Thursday, October 8, 2020 4:45 PM
To: Hawdon, James <hawdonj@vt.edu>
Cc: Bodenhorn, Nancy <nanboden@vt.edu>
Subject: Permission to include SOC prerequisites on checksheet

Hello Dr. Hawdon,

Thank you for allowing us to include SOC 3714 Sociology of Aging and SOC 4014 Sociology of the Family on our Career and Technical Education Major, Family and Consumer Sciences Option checksheet. The registrar has suggested that we also include the prerequisite courses, SOC 1004 Introduction to Sociology and SOC 2014 Sociology of Intimate Relationships.

Please reply to this email if that is acceptable.

Respectfully

--

Dawn Knight-Withers, MAEd
Hello, Dawn.

Sociology is happy to have SOC 3714 Sociology of Aging and SOC 4014 Sociology of the Family included in the Family and Consumer Sciences Education majors to meet VDOE competencies.

Thanks,

[Quoted text hidden]
Hi Nancy,

Thanks for the request. Yes, the Statistics Department supports including its courses in the graduation checksheets for the new majors. As things evolve, let me know if students are having difficulty getting into 2004.

Best,

Dave Higdon

Head, Department of Statistics

On Sat, Jul 25, 2020 at 3:01 PM Bodenhorn, Nancy <nanboden@vt.edu> wrote:

Hello David,

Currently, I am putting together program proposals to send to the Undergraduate Curriculum Committee for new Education majors and I was hoping to get written support from your department allowing us to include courses on our graduation checksheets. I am told that if you are willing to agree, an email response to that effect is sufficient.

Currently we are submitting proposals for Math Education as well as Career and Technical Education which includes 4 majors; Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education.

Secondary Mathematics Education (10-15 students double major in Math, so probably not an addition)

STAT 3005: Statistical Methods OR

STAT 3604: Statistics for Social Science

(as Pathways)

All Career and Technical Education Majors (Ag Ed, BIT, FCS, and Marketing ) (likely 20 – 25 students total)

STAT 2004: Introductory Statistics (as Pathways)

Please let me know if you have any questions or, if this is someone else's responsibility, could you please point me in the right direction? Thank you for your time.

Thank you so much!

Nancy
Hello Dr. Breslau,

I am currently putting together undergraduate curriculum committee proposals for Career and Technical Education which includes four new majors. I was hoping to get written support from your department allowing us to include STS 2254 Innovation in Context as Pathways on graduation checksheets for Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. I am told that if you are willing to agree, an email response to that effect is sufficient.

Please let me know if you have any questions or, if this is someone else’s responsibility, could you please point me in the right direction?

Thank you!

--

Dawn Knight-Withers, MAEd
Pre-Education Advising Coordinator, Virginia Tech School of Education

Daniel Breslau <dbreslau@vt.edu>  
Fri, Jul 17, 2020 at 1:53 PM

Dear Dawn Knight,

The Department of Science, Technology, and Society approves of the inclusion of STS 2254 Innovation in Context on checksheets for Career and Technical Education majors in Agricultural Education, Business and Information Technology Education, Family and Consumer Sciences Education, and Marketing Education. Inclusion of the course in those programs will not require additional resources. Please let me know if I can be of further assistance.

Best wishes,

Daniel Breslau
Chair, STS Department

[Quoted text hidden]

--

Daniel Breslau
Associate Professor and Chair
Department of Science, Technology, and Society
Virginia Tech
133 Lane Hall
Blacksburg, VA 24061-0247
(540) 231-8472 (work)
(540) 449-9791 (mobile)
RESOLUTION TO ESTABLISH A
SCHOLARLY ARTICLES OPEN ACCESS POLICY

WHEREAS, Virginia Tech authors publish scholarly articles, typically in peer-reviewed journals, in order to advance knowledge in their field, and additionally for faculty, to meet the requirements of promotion and tenure, and

WHEREAS, the majority of those articles are not available to the public, because most scholarly publishers require authors to transfer copyright to them, and scholarly publishers then limit access to those articles, and

WHEREAS, the public includes scholars in low and middle income countries, government policymakers, non-governmental organizations, taxpayers, and Virginia Tech alumni, and

WHEREAS, authors do not benefit from the full dissemination of their work when access is limited, as many citation studies have shown, and

WHEREAS, the university is not fully meeting its mission as a public land-grant university, or as a global land-grant university, when access to its research is limited, and

WHEREAS, in 2016, Virginia Tech’s Commission on Research created the Open Access Policy Working Group to draft a policy to address these issues, while consulting with faculty, staff, and students across the university, and

WHEREAS, the working group made presentations about the attached policy to Virginia Tech’s Commission on Research, Commission on Faculty Affairs, and the Faculty Senate each year since 2017, as well as to multiple groups on campus; has consulted with University Legal Counsel; has created a policy website (http://bit.ly/vtoapolicy) with resources and frequently asked questions; has given more than 20 presentations, and issued a campus news article; and has addressed questions and concerns in person and by email,

NOW, THEREFORE BE IT RESOLVED, that Virginia Tech authors hereby grant a non-exclusive license to the university to enable it to legally share their scholarly articles via the institutional open access repository, and authors make a commitment to provide the accepted manuscripts of those articles for global dissemination, as detailed in the attached revision of Policy 13000.

RECOMMENDATION:
That the Board of Visitors approve this resolution to establish a scholarly articles open access policy.

March 22, 2021.
Policy on Intellectual Property

1.0 Purpose

Publicly (state) supported universities have the multiple missions of teaching, research, support of the public interest and fostering of economic development of the area/state in which they are located.

Scholarly activities in a University setting create Intellectual Properties (IPs). IPs include research papers, books, software programs, new inventions, journal articles, etc.

With regard to research data, results, and related materials for projects conducted at the university, under the auspices of the university, or with university resources, please refer to Policy 13015, "Ownership and Control of Research Results."

The University's mission includes dissemination of IPs in the most efficient and effective manner possible. The identification and optimization of opportunities for the industrial/commercial utilization of some IPs is also part of this mission, as is the protection of the ownership rights of both the individuals and the University.

While many IPs are best disseminated by publication and placing in the public domain, there are a significant number that are most effectively handled by protection under the IP laws (i.e., patenting and copyright) and licensing (or other transfer) to private sector entities, with attendant financial considerations.

This Policy is designed to establish the rationale and the mechanisms to:

1. Establish ownership criteria and resolve ownership questions if such arise.
2. Define the responsibilities, rights and privileges of those involved.
3. Develop basic guidelines for the administration of the IP Policy.

This Policy applies to all employees, students, and all other persons or entities using University resources pursuant to this policy.

2.0 Policy
2.1 Organization

The Intellectual Properties Committee (IPC) membership shall be as stated in the By-Laws of University Council.

2.2 Authority and Responsibility of the Committee

The IPC shall have the following authority and responsibility with respect to Intellectual Property:

A. To develop and recommend University policy and policy changes dealing with IP to the Commission on Research.

B. To review all disputed invention disclosures submitted by Virginia Tech faculty, staff and/or students for:
   1. Complete and appropriate disclosure of individuals involved in the invention and/or creation of the IP.
   2. Confirm the determination of IP ownership by University, originating individuals, research sponsors and/or governmental agencies.
   3. Examination and recommendation to the Executive Vice President and Provost for disposition of (1) and/or (2) above in those cases where a dispute remains.
   4. Coordination of evaluation and recommendation to Virginia Tech Intellectual Properties, Inc. (VTIP) of technical merit, economic potential and protection/marketing priority as needed.

C. To make recommendations to the Executive Vice President and Provost for the sharing of royalties between the University and the authors or inventor(s) of the IPs owned by the University.

D. To promulgate such guidelines and procedures as may be necessary for the implementation of this Policy.

Much of the work of the IPC as defined above will be addressed through the normal business of the full committee. However, it may be prudent in the review of certain disputed invention disclosures to have a subgroup of the entire IPC to more fully consider all necessary aspects of the dispute. This shall be the role of the Ownership Review Group, which will be composed of three at-large members of the IPC (selected by the IPC Chair) and be chaired by the IPC Chair. This group shall meet as needed with the following agenda:

1. Review all disclosures submitted that have ownership in dispute.
2. Confirm University ownership as necessary for those disclosures in which originator(s) have indicated Virginia Tech ownership.
3. Review disputes involving sponsor ownership/rights.
4. Review, discuss and reach preliminary conclusions on ownership disputes and forward recommendations to the full IPC.
2.3 Policy Guidelines

This section outlines the criteria to be used by the IPC and its working groups in their deliberations, findings and recommendations. To the extent that individual questions are not specifically addressed, these guidelines will, at the least, give a general indication of intent and philosophy and allow proper interpretation.

A. Ownership of IP

For purposes of this policy creations are divided into two groups:

1. The traditional results of academic scholarship, i.e. scholarly articles, textbooks, literary works, artistic creations and artifacts.

2. The novel results of research such as products, processes, machines, software, biological technology, etc.

   a) With regard to research data, results, and related materials for projects conducted at the university, under the auspices of the university, or with university resources, please refer to Policy 13015, “Ownership and Control of Research Results.”

Intellectual properties in the first (traditional) group are considered to make their full contribution to the University's benefit by their creation and by continued use by the University in teaching, further development, and enhancement of the University's academic stature; the presumption of ownership is to the author(s). Thus, unless there is explicit evidence that the work was specifically commissioned by the University, the IP rights remain with the author(s) and the University rights are limited to free (no cost) use in teaching, research, extension, etc. in perpetuity.

Intellectual properties in the second group, as a condition of employment or other involvement in research and/or related activities using University resources, the ownership is to the University (with the originator having a right to share in the benefits derived therefrom in accord with University sharing guidelines). Thus unless there is convincing and explicit evidence that the IP was developed without the use of University resources and/or facilities (which may include but is not limited to any of the following: use of equipment, lab or office space, University time of originator and/or personnel under his/her control, funds supplied by the University and/or funds originating from sponsored research projects and/or donations to University/affiliated companies, etc.), ownership of the IP rests with the University and the originator(s) do hereby assign ownership, right, title, and interest in any IP, discovery, or invention to the University.

Within the above general guidelines, the following situations are more specifically defined:

1. Ownership of IP developed by students: The University will not generally claim ownership of IP created by students. However, in the matter of course generated IP, including courses for research or independent credit, the student(s) shall have ownership only if they made use of resources that are a) made available by the College /Department administering the University course to all students enrolled in the course; and b) provided to all students enrolled in the course for academic credit when there are no pre-existing obligations for the University in connection with such course generated intellectual property, and/or the student(s) are not paid by the University in the scope of such course.

Commented [2]: Added as a reference to Policy 13015, “Ownership and Control of Research Results.” (13015 also references back to 13000.)
A student may choose to assign the ownership right in IP to the University and/or VTIP if all the parties agree to such a transfer.

If students develop IP in their capacity as employees, such IP shall be governed as set forth above and ownership is automatically vested in the University, including novel results of research in which the originator(s) do hereby assign ownership, right, title, and interest in any IP, discovery, or invention to the University.

2. In the event the following condition(s) apply, visiting scholars and volunteers do hereby assign any IP rights to the University when:
   a) working on a research project funded by Virginia Tech or an entity outside of Virginia Tech sponsoring the research through Virginia Tech from which the IP was created; or,
   b) employed or receiving payment from Virginia Tech related to a project from which the IP was created; or,
   c) University resources not available to the public are used in the creation of the IP.

3. Sponsor Rights: In the case in which an IP is generated as a result of research funded by a private sector company under a sponsored research project, the IP rights of the sponsor as defined in the applicable clauses ("Patents & Copyrights," "Intellectual Properties," "Inventions," etc.) of the Sponsored Research Agreement (as approved by the Vice President for Research or their designee and signed by an authorized officer of the University) shall take precedence over the rights of the University/inventor(s). Any residual rights not accruing to the sponsor shall be as defined in the general guidelines above.

4. Federal Agency Rights: Research projects sponsored by an agency of the federal government have statutory IP rights that are limited (in almost all cases) to a non-exclusive non-transferrable royalty free license to any patent generated by the research, provided the inventor(s)/University advise the agency in a timely manner of their intent to retain their rights and provide for legal protection (i.e. patenting). It is the responsibility of the researcher to advise the agency of the creation of the IP and (with the assistance of the University IP manager, VTIP) advise of the protection steps being undertaken. The residual rights not belonging to the sponsoring agency shall be as defined in the general guidelines above.

5. Joint Inventorship: For IPs generated by a team of inventors in which one or more are not members of the faculty/staff/supported students, each inventor is usually entitled (by law) to shared ownership of the entire right. The University's claim to the shares of University-associated inventors will be as outlined in these guidelines. Ownership of outside inventors will vest in them or their assignees.

6. Special Situations: In the event that an IP ownership situation arises which is not addressed in either the general or specific guidelines outlined above, the IPC shall make a recommendation based on the spirit of the guidelines. A record of the rationale used to arrive at their recommendation shall be kept and used as a precedent for the handling of future special situations if applicable.

7. Commissioned Works: There are times when the University will choose to enter into a contractual arrangement to commission a specific work or undertaking. The University, as the commissioning party, may be expected to maintain certain rights of third parties. These rights are negotiable on a case by case basis, but generally the University expects, at a minimum:
B. Obligation to Disclose

While it is recognized that faculty and staff mission and expertise is concentrated and directed in areas other than commercial utilization, originators of new technology shall submit a disclosure when any IP is developed. Timely (i.e., before publication or other enabling non-confidential disclosure) submission of a disclosure to VTIP may also be critical to the value of the IP.

To the extent (and as soon as) the researcher/inventor/creator obtains research results that may be considered an IP and recognizes that they may have potential for commercial utilization there exists an obligation to bring these results to the attention of VTIP in the form of a disclosure.

If, in the absence of a timely disclosure, commercial utilization of a technology takes place with the direct or indirect involvement of the originator(s) but without involvement by the University it will be deemed that the originator(s) have not fulfilled their obligation to disclose and the University may:

1. Take whatever legal and/or business action is necessary to protect its rights and rightful share of financial benefits and ownership.
2. Deny to originator(s) any share of revenues which would otherwise accrue to them under this policy.

C. Notification and Granting Back Rights to the Inventor(s)

As a general rule, the IP in question may be released back to the Inventor(s) if VTIP and the University do not wish to pursue protection or other use. The Inventor can request that the rights be released to him or her to pursue other avenues. In the event ownership is released to the Inventor(s), as a condition of the transfer, Virginia Tech shall be granted a non-exclusive, fully paid-up, royalty free license to use the IP for internal teaching, research, and outreach purposes.

Commented [PV3]:

#8 is added to provide the Open Access policy that will allow all Virginia Tech authors to submit accepted manuscripts for scholarly articles to our university institutional repository.

For more information on open access, how to deposit accepted manuscripts, and other Frequently Asked Questions, see this web page from the Commission on Research Open Access Policy Working Group: https://sites.google.com/a/vt.edu/cor-oa-policy-working-group/frequently-asked-questions, or reach out to the working group with questions or comments to: openaccess@vt.edu
Any request to release the invention to the inventor(s) should be communicated to VTIP in a timely manner to preserve the potential for IP protection. It is University’s discretion to follow such a request (if permissible under University policies, applicable law, sponsorship agreements or other contractual obligations).

D. Revenue Sharing

Revenues generated by the successful commercialization of IPs owned by the University (whether or not protected by patent and/or copyright) shall be shared equally between the University and the originator(s) of the IP, subject to the conditions and exceptions outlined below.

1. Revenues subject to sharing include royalties, licensing fees, incentives, etc. received by the assignee licensor organization, less the costs/expenses described below. Specifically excepted from sharing are payments received and designated for specific purposes such as sponsored or unrestricted research grants, services to the University, research equipment and/or materials, consulting fees to researchers, etc. These payments will go directly to the designated entity and purpose.

2. Also excepted from sharing are revenues resulting from:
   a) Tasks and/or activities specifically and explicitly assigned to employees by an administrative unit of the University, or
   b) Activities and/or tasks clearly defined in the written, University approved, policy of an administrative unit of the University.

   Such revenues, flowing through the University assignee organization, will accrue to the originating administrative unit of the University net of development costs.

3. Expenses to be subtracted from gross revenue before sharing shall be limited to documented direct and indirect costs for protection (patenting), marketing and development of the IP. Specifically excluded are costs incurred in the generation of the IP (i.e. research costs). Development costs shall include (but not be limited to) payments made to (or retained by) non-affiliated organizations (e.g. Research Corp. Technologies, CIT, etc.) involved in the process of commercializing the IPs owned by the University.

4. Non-cash compensation for rights to an IP may be accepted but only with the informed consent of the originator(s) of the IP. The share of net revenue not paid to the originator(s) (50 percent) shall be applied as follows:
   a) A portion equivalent to at least 10 percent of total net revenue may be distributed to the originator(s)' primary unit(s) (e.g. Departments, Centers, etc.).
   b) The remainder to the University assignee organization (VTIP).

E. Management Responsibility

Virginia Tech Intellectual Properties, Inc. (VTIP), a non-profit corporation affiliated with the University, has been established and charged with the mission of protecting and utilizing IPs for the benefit of the University.
All IPs assigned to the University shall flow to VTIP by assignment for operational management. The IPC should make appropriate inputs and recommendations as to disposition and priority of individual IPs. Originator(s)' inputs/suggestions to VTIP are also appreciated.

F. Right Of Appeal

The originator(s) of an IP covered by this Policy shall have the right to appeal application of the policy to the IPC. The IPC will formulate recommendations relative to each such appeal, and will forward both the appeal and its recommendations to the Office of the Executive Vice President and Provost in a timely manner. The Executive Vice President and Provost will determine the University's response to each appeal, and will so notify the originator(s) and the IPC.

If the originator(s) disagree with the IPC recommendation regarding ownership, a written appeal to the Executive Vice President and Provost must be filed within (30) thirty days of receipt of notification of the IPC recommendation. This appeal should contain an exposition of the facts as seen by the originator(s), any information they deem pertinent to the case, as well as any applicable citations of policy guidelines. A copy of the appeal document should be sent to the IPC via its Chair.

Upon receipt of the appeal, the Executive Vice President and Provost may elect to consult with any and all concerned prior to reaching a decision in the case.

In the event that any member of the University (faculty, staff or student) perceives and/or becomes aware of any irregularity in the inventorship/authorship of an IP disclosed (or about to be disclosed) to VTIP or the IPC he/she should bring it to the attention of the other inventors/authors involved and/or the Department Chair(s) (or the director or unit leader in situations outside the traditional academic departments) concerned in an attempt to resolve the conflict equitably and amicably. Failing such resolution, the facts of the cases should be submitted in writing within (30) thirty days to the Vice President for Research (with copy to the Chair of the IPC) with a request for review by the Ownership Review Group of the IPC.

Upon receipt of such a request, the Ownership Review Group shall review the facts of the case, convene a hearing for all concerned parties, reach a conclusion and present a synopsis of the case and a recommendation to the full IPC who will, in turn, make a recommendation to the Executive Vice President and Provost.

G. Policy Exceptions

The President of the University may, upon recommendation by the IPC and the VP for Research and Innovation, authorize exceptions to this Policy. Such exception shall be memorialized in writing and shall set forth the extent of any deviation from this Policy. It is the intent of this clause that such exceptions be granted sparingly and in the best interest of the entire University.

3.0 Procedures
4.0 Definitions

5.0 References

Policy 13015, “Ownership and Control of Research Results.”

6.0 Approval and Revisions

Approved by University Council, November 17, 1986.
Approved by the President, November 17, 1986.
Approved by Board of Visitors, December 5, 1986.

- Revision 1
  Approved by University Council, December 2, 1991.
  Approved by the President, December 2, 1991.

- Revision 2
  August 31, 1999: Revised membership titles to reflect changes in titles, responsibilities, and University Council By-laws.

- Revision 3
  April 15, 2008: Revised membership titles to reflect changes in titles and responsibilities.

- Revision 4
  Revised extensively to reflect Code of Virginia requirements of state employees regarding disclosure, to provide language about student IP, reflect current operating procedures of the IPC, and address “Commissioned Works.”

  Approved by University Council, April 29, 2013.
  Approved by President Charles W. Steger, April 29, 2013.
  Approved by Board of Visitors, June 3, 2013.

- Revision 5
  Revised extensively to provide additional language about student ownership of IP, to address the process by which IP may be released back to the inventor, and to address the process by which exceptions to Policy 13000 will be reviewed and approved.

  Approved by the Board of Visitors on June 1, 2015
  Approved June 30, 2015 by University President, Timothy D. Sands

- Revision 6

Commented [4]: Added due to addition of references in the policy text to Policy 13015, “Ownership and Control of Research Results.” (13015 also references back to 13000.)
Revised to provide additional language in 2.3.A. #8 regarding licensing and process for open access deposit of the accepted manuscript of Virginia Tech authors’ scholarly articles in the university’s institutional repository, and for Virginia Tech authors to be able to post such accepted manuscripts elsewhere as well. Also added references to the related Policy 13015, “Ownership and Control of Research Results.” This revision is not retroactive.

Approved by the Board of Visitors on
Approved ____________ by University President, Timothy D. Sands
RESOLUTION TO APPROVE APPOINTMENT TO THE VIRGINIA COAL AND 
ENERGY RESEARCH AND DEVELOPMENT ADVISORY BOARD

WHEREAS, the Virginia Coal and Energy Research and Development Advisory Board was established in 1977 by the enabling legislation for the Virginia Center for Coal and Energy Research, and the legislation requires approval by the Virginia Tech Board of Visitors of new appointments, reappointments, and changes in the membership of the advisory board; and

WHEREAS, the proposed new appointment is Mr. Larry E. Jackson; and

WHEREAS, Mr. Jackson is the external affairs director for Appalachian Power’s Virginia and Tennessee service areas, has a degree in electrical engineering from West Virginia University and an MBA from Averett University, and is a registered professional engineer in Virginia and West Virginia;

NOW, THEREFORE, BE IT RESOLVED, that Mr. Larry E. Jackson be appointed as a new member of the Virginia Center for Coal and Energy Research and Development Advisory Board beginning April 1, 2021, and ending December 31, 2025.

RECOMMENDATION:

That the Board of Visitors approve this resolution appointing Mr. Larry E. Jackson to the Virginia Center for Coal and Energy Research and Development Advisory Board.

March 22, 2021
RESOLUTION TO REVISE FACULTY HANDBOOK PROMOTION AND TENURE GUIDELINES

WHEREAS, chapter three of the university's Faculty Handbook -- Employment Policies and Procedures for Tenured and Tenure-Track Faculty -- has not been thoroughly revised in many years; and

WHEREAS, based upon the shared belief of the Faculty Senate and the Office of the Provost that a thorough revision was warranted, a Commission on Faculty Affairs working group was formed for this purpose in the fall of 2016; and

WHEREAS, the working group sought to simplify and standardize procedures, clarify and update requirements, and ensure the equitable treatment of faculty while maintaining Virginia Tech’s high academic standards; and

WHEREAS, the Commission on Faculty Affairs has periodically presented the revision to the Faculty Senate, department heads/chairs, and deans and incorporated many of the suggestions these groups have offered; and

WHEREAS, the Faculty Senate and the Office of the Provost believe that the revision, which includes changes to the guidelines for processing promotion and/or tenure cases and the standards by which cases are evaluated, improves upon the guidelines and traditions that have served Virginia Tech well for many years; and

WHEREAS, the Vice Provost for Faculty Affairs will work with faculty and administrators to facilitate the transition between the current and new guidelines;

NOW, THEREFORE, BE IT RESOLVED, that the Faculty Handbook promotion and tenure guidelines will be revised according to the full text included in Appendix 2; and

BE IT FURTHER RESOLVED, that these revised guidelines will become effective beginning with faculty considered for promotion and/or tenure during the 2022-2023 academic year.

RECOMMENDATION:

That the Board of Visitors approve this resolution for inclusion in the university’s 2021 – 2022 Faculty Handbook.

March 22, 2021
Appendix 1: Summary of major changes in Chapter 3 revision

1) Added the following language about limitations on the overall process and review of procedural concerns raised by faculty serving on P & T committees (3.4):

Once a promotion and/or tenure case has been submitted, it must proceed through the processes outlined in this chapter unless the candidate chooses to withdraw his or her case. This is true even if a candidate has accepted a position at another institution: under these circumstances, the case proceeds normally, up to and including the president’s recommendation, but will not be taken to the Board of Visitors.

To ensure the honest discussion of promotion and/or tenure cases, all parties involved must keep the deliberations strictly confidential to the extent permitted by law. As such, the content of conversations and the results of any votes may be discussed only with persons who have a current role in the promotion and tenure process, such as committee members or administrators. However, faculty serving on promotion and tenure committees who believe that Faculty Handbook procedures are not being followed may bring their concerns to the Faculty Review Committee for confidential review as outlined in chapter one, “Faculty Review Committee.”

2) Added description of P & T documents required for each department (3.4):

Each department will maintain promotion and/or tenure guidelines in a single document that follows the university template and includes all information regarding departmental procedures and expectations for reappointment, progress toward promotion and/or tenure, and the evaluation of promotion and/or tenure cases. Nothing in these guidelines shall supersede or contradict the provisions of the Faculty Handbook. If a college elects to adopt guidelines that establish a college-wide standard for promotion and/or tenure, with the dean’s approval, departments may maintain a set of guidelines that interpret the college-wide standard within the context of the department’s disciplines and traditions. All guidelines will be approved by faculty (through department- and/or college-level governance), the college-level committee and the dean, and the provost’s office, and will be made available on-line. Revisions to these guidelines must also be approved by the faculty, the college, and the provost’s office. In addition to tenure-track faculty, guidelines will cover the promotion of all non-tenure-track faculty.

3) Revised the basic criteria for promotion and/or tenure and added the use of “Expectations and Indicators For Promotion and/or Tenure.” Changed the categories (Instruction, Research, etc), and most of the language used to describe them, to agree with the Provost’s guidelines (3.4.4):

Current: Each candidate for tenure and/or promotion to associate professor is evaluated in the light of the triple mission of the university: learning, discovery, and engagement. Although not all candidates are expected to have equal levels of commitment or equal responsibilities in each of these missions, a high level of general competence is expected in recognition of the need for flexibility in the future establishment of priorities in academic programs. Beyond that basic foundation of competence, decisions related to tenure or promotion to associate professor require evidence of excellence in at least one area.

The award of tenure is based on the achievement of distinction in an area of learning and the prediction of eminence throughout the individual’s professional career. The documentation and evaluation should recognize some significant impact of the candidate's contributions beyond the borders of the university. If the primary strength is in instruction, there should be recognition that the candidate’s pedagogical contributions have influence beyond the immediate classroom; if in
research, that there is significant impression on colleagues nationally; if in outreach that the influence of the contributions reaches beyond the immediate clientele.

Proposed: In accordance with their assignments and as outlined in the “Virginia Tech Guidelines for Promotion and Tenure Dossiers” document available from the provost’s office, candidates for promotion and/or tenure will be evaluated in the following categories: teaching, scholarship, and service. While candidates are not expected to have equal levels of commitment or equal responsibilities in all of these areas, scholarship is expected of all tenure-track faculty to a degree and in a discipline appropriate for their assignment.

Teaching (Includes advising/mentoring): Teaching is a multifaceted activity that includes formal and informal advising/mentoring. In any assessment of a candidate for promotion and/or tenure, both the quality and the quantity of the individual’s achievements in teaching and advising/mentoring should be considered. Those evaluating candidates for promotion and/or tenure should give special consideration to teaching effectiveness: faculty must demonstrate the ability to evaluate scholarship applicable to their field and effectively teach their discipline to students.

Scholarship (Includes research, creative activities, and extension activities): Scholarship, broadly defined at Virginia Tech as the discovery, transmission, and/or application of knowledge, takes many forms, including but not limited to research, creative activity, and extension activity. While both the quality and quantity of a candidate’s achievements should be examined, quality should be the primary consideration. Quality should be defined largely in terms of the work’s importance in the progress or redefinition of a field or discipline, the establishment of relationships among disciplines, the improvement of practitioner performance, or the creativity of the thought and methods behind it. To be awarded tenure, in addition to demonstrating productivity as a scholar, a candidate must provide evidence that their scholarship has growing impact nationally or internationally and the potential for greater impact in the future. Promotion to the rank of professor requires evidence of ongoing or renewed productivity and the realization of a candidate’s potential for greater impact nationally or internationally, including a description of how their scholarship has influenced their field.

Service (Includes engagement, university service, professional service, medical service, inclusion and diversity, and additional outreach and extension activities): In the spirit of Ut Prosim (That I may serve) and the land-grant mission, faculty are expected to use their knowledge, creativity, and expertise to improve the human condition and engage the communities of which they are a part. Candidates must demonstrate their contributions to the governance, development, and vitality of the university, their academic professions, and other relevant communities at the local, state, national, and/or international level. The quality and effectiveness of healthcare delivery and outreach and extension activities that are not considered scholarship should also be documented.

Evaluators must consider the unique features of every candidate’s department, discipline, and assignment. Therefore, as part of their promotion and/or tenure guidelines (see Chapter 3, “Promotion and Tenure”), each department (or college, when college-wide guidelines are applied) is required to have an “Expectations and Indicators for Promotion and/or Tenure” section that accounts for disciplinary and programmatic differences unique to and within the department(s) and...
specifies what is required of their faculty members to fulfill the general expectations outlined above. Departments or colleges should carefully assess and state the overall standards of professional performance and contribution they consider minimally acceptable for the conferral of promotion and/or tenure. These expectations must be adhered to by evaluators at every stage of the promotion and/or tenure process. Colleges that adopt a college-wide set of promotion and/or tenure guidelines will ensure that the “Expectations and Indicators for Promotion and/or Tenure” section accounts for differences within and across departments and schools.

Since expectations can change, tenure candidates will be evaluated according to the expectations and indicators in effect at the time of their appointment. Candidates for promotion to professor will be evaluated according to the expectations and indicators in place at the time of their application for promotion.

3) Heads/chairs no longer have the option to serve on department committees (3.4.4.1).

4) For mandatory cases, full college review (both dean and college committee) of no/no decisions at the department level will be automatic (3.4.4.2).

5) Members of college and university committees must be given a period of time to discuss the cases w/o deans or the provost in attendance (3.4.4.2 & 3.4.4.3).

6) The guidelines covered in a document titled “Promotion and/or Tenure Procedures for University Committee Deliberations and Notifications” are not in the Faculty Handbook. We included a stripped-down version of those guidelines and made clear that the handbook provides the guidelines for the Univ. P & T Committee procedures, not the other way around (3.4.4.3).

7) Clarified that the University Promotion and Tenure Committee only votes once by removing the use of terms such as “straw votes” or “straw ballots” in favor of the following (3.4.4.3):

   The committee then rates the cases to clarify which cases need more discussion.

8) Added a candidate notification sub-section. Candidates are notified of the decision at each level of the process (3.4.4.4):

   As a promotion and/or tenure case proceeds, the candidate must be notified in writing of the recommendations made by each committee and administrator.

   Any negative recommendations, whether by a committee or administrator, must include all substantive reasons for that recommendation, including references to the “Expectations and Indicators” section of the relevant promotion and/or tenure guidelines, as well as options for appeal. While notification letters may include excerpts from committee or administrator letters, they cannot include the results of any votes, the names of external evaluators, or statements from their evaluations.

9) Revised the grounds for appeal and clarified the relationship between an appeal and a grievance (3.4.5):

   Current: The appeal can only be based on grounds that certain relevant information was not provided or considered in the decision, or that the decision was influenced by improper consideration.

   Proposed: An appeal can be based on the following claims only: department criteria established in the “Expectations and Indicators” section of the relevant department’s promotion and/or tenure guidelines were not appropriately applied; material from the dossier was unavailable to or
disregarded by reviewers through no fault of the candidate; or information in the dossier was not considered in a fair and objective manner.

Additionally, faculty have the option to grieve procedural violations of the promotion and tenure process—including violations of the appeal process presented in this section—after a negative decision on an appeal or instead of filing an appeal in the first place. Since the grievance procedures allow the grievant to state both the grievance they believe they have experienced and the relief they seek, it has a wider range of possible outcomes than the appeal process. However, because it is a slower process that may not be completed until the promotion and/or tenure cases in a given year have been decided, and because faulty cannot grieve “items falling within the jurisdiction of other university policies and procedures,” a grievance should be thought of as a means for faculty to seek an outcome they cannot seek through the appeal process. The grievance process is described in chapter three, “Faculty Grievance Policy and Procedures.”

10) Expanded which cases can be appealed and simplified the appeal process (3.4.5.2):

*Current:* Occasionally faculty members are evaluated for a tenured appointment during the probationary period but before the final probationary year. In such a case, there is no recourse to appeal or review of a negative decision, at whatever level it is reached, because of the certainty that the evaluation will be undertaken again within a limited time.

Evaluation for a tenured appointment is mandatory in the sixth year of probationary service unless the faculty member has given written notice of resignation from the faculty. If both the departmental committee and the department head or chair agree that the faculty member’s record does not warrant a tenured appointment, there is an automatic review of the candidate’s dossier by the dean. If the dean concurs, the faculty member is notified by the dean, in writing, of the decision and the specific reasons for it. The faculty member may then request, through the dean, that the college committee on promotion and tenure independently review the decision. The faculty member presents the appeal in writing as specified in chapter three “Appeals of Decisions on Reappointment, Tenure, or Promotion.” The faculty member may elect to present oral arguments to the committee as well. If the committee concurs with the decision, the decision is final. The dean so notifies the faculty member, in writing, and no further appeal is provided.

During the automatic review of the candidate’s dossier, the dean may wish to reserve judgment. In such a case, the dean notifies the faculty member of the departmental decision and tells the faculty member that he or she is requesting the college committee on promotion and tenure to undertake an independent review, as specified in the previous paragraph, and to make a recommendation. Should the college committee and the dean concur with the departmental decision, the decision is declared final, the faculty member is so notified, and no further appeal is provided. The specific reason for the decision is provided to the faculty member in writing.

In any case of college-level review of a negative departmental decision, a positive recommendation by either the college committee or the dean is sent with the dossier to the University Promotion and Tenure Committee in the same way as in the usual review process.

If the college committee and the dean undertake the review based on a positive recommendation of either or both the departmental committee and the department head or chair and if the college committee recommends that tenure not be awarded and the dean concurs, the faculty member is notified of the negative decision with reference to appeal procedures. The specific reasons for the decision are furnished to the faculty member in writing. The faculty member may then appeal to the provost for review of the decision by the university committee, which makes a recommendation to
the provost for a final decision. The faculty member presents the appeal in writing as specified in chapter three, “Appeals of Decisions on Reappointment, Tenure, or Promotion.” No further appeal is provided. The university committee may choose to hear oral arguments.

Should the provost not concur with a positive recommendation from the University Promotion and Tenure Committee, whether that recommendation culminates a usual review or an appeal, the faculty member is so notified in writing of the specific reason for the decision. The faculty member may appeal to the Faculty Review Committee. That committee investigates the case and, if the differences cannot be reconciled, makes a recommendation to the president on the matter. The president’s decision is final.

During review following an appeal, the college committee may find reason to believe that the departmental evaluation was biased or was significantly influenced by improper considerations. In that case, the reviewing committee may request that the college dean form an ad hoc committee to re-initiate the evaluation. The ad hoc committee is composed, as feasible, of faculty members in the candidate’s department or in closely allied fields and does not contain any members of the original committee.

Should the university committee make such a finding in the review of an appeal relative to the college evaluation, it requests the dean to form a new ad hoc committee at the college level. The ad hoc committee makes a recommendation to the committee that requested its formation.

Proposed: Appeal of negative department or college decisions: Because all mandatory tenure cases, even those given a negative recommendation by the department committee and the head or chair, receive a full college level review, there is no appeal of a negative tenure decision at the department level.

With all non-mandatory cases, whether promotion and/or tenure, if the committee and the relevant administrator both make negative recommendations, the candidate may appeal that negative decision to the next level in the process. The faculty member has the right to appear before the committee considering the appeal and present arguments.

If either the college committee or the dean grants the appeal of a negative department decision, the case resumes normal consideration, beginning with the college committee and dean. If either the University Promotion and Tenure Committee or the provost grants the appeal of a negative college decision, the case resumes normal consideration, beginning with the University Promotion and Tenure Committee and the provost. At either the college or university level, if the committee and the relevant administrator both make negative recommendations, the appeal is denied and no further appeal is provided.

Appeal of negative university decisions: Because all recommendations from the University Promotion and Tenure Committee and the provost are forwarded to the president, candidates may appeal negative recommendations of either or both to the Faculty Review Committee. The faculty member has the right to appear before the committee to present arguments. The Faculty Review Committee investigates the case and makes a recommendation to the president.

The president’s recommendation to the Board of Visitors, and the Board of Visitors’ final decision, cannot be appealed.

11) Added a table of appeal options (3.4.5.2)
Appendix 2: Full text of Chapter 3 revision

3.4 Promotion and Tenure

Promotion in rank and the granting of tenure are based on a faculty member’s contributions to the university in the areas of teaching, scholarship, and service. Decisions about promotion and/or tenure are guided by the Virginia Tech Principles of Community (see chapter two, "Virginia Tech Principles of Community").


Faculty members being considered for promotion and/or tenure have their dossiers reviewed at as many as three levels: by a department committee and the head or chair, by a college committee and the dean, and by a university committee and the provost.

Once a promotion and/or tenure case has been submitted, it must proceed through the processes outlined in this chapter unless the candidate chooses to withdraw their case. This is true even if a candidate has accepted a position at another institution: under these circumstances, the case proceeds normally, up to and including the president's recommendation, but will not be taken to the Board of Visitors.

To ensure the honest discussion of promotion and/or tenure cases, all parties involved must keep the deliberations strictly confidential to the extent permitted by law. As such, the content of conversations and the results of any votes may be discussed only with persons who have a current role in the promotion and tenure process, such as committee members or administrators. However, faculty serving on promotion and tenure committees who believe that Faculty Handbook procedures are not being followed may bring their concerns to the Faculty Review Committee for confidential review as outlined in chapter one, "Faculty Review Committee."

Although some participants in the review process may serve at more than one level—for example, a departmental committee member may also serve on the college committee—participants may vote only once on a case and must vote at their first opportunity to do so. A faculty member may not serve on any committee that is evaluating a spouse, family member, or other individual with whom they have a close personal relationship. (See chapter two, "Conflicts of Interest.")

Each department will maintain promotion and/or tenure guidelines in a single document that follows the university template and includes all information regarding departmental procedures and expectations for reappointment, progress toward promotion and/or tenure, and the evaluation of promotion and/or tenure cases. Nothing in these guidelines shall supersede or contradict the provisions of the Faculty Handbook. If a college elects to adopt guidelines that establish a college-wide standard for promotion and/or tenure, with the dean's approval, departments may maintain a set of guidelines that interpret the college-wide standard within the context of the department's disciplines and traditions. All guidelines will be approved by faculty (through department- and/or college-level governance), the college-level committee and the dean, and the provost’s office, and will
be made available online. Revisions to these guidelines must also be approved by the faculty, the college, and the provost’s office. In addition to tenure-track faculty, guidelines will cover the promotion of all non-tenure-track faculty.

A note on the Promotion and Tenure section of the Faculty Handbook: Throughout this section, it should be understood that departmental procedures, expectations, and standards also apply to schools. For example, the procedures for department-level committees are also the procedures for school-level committees.

3.4.1 Tenure Eligibility (unchanged)

Tenure is an institution developed to protect the academic freedom of the teaching faculty in institutions of higher education. Eligibility for tenure consideration is limited to faculty members holding regular faculty appointments of 50 percent to 100 percent in academic departments. Tenure is not granted to faculty members with temporary appointments or to administrative and professional faculty. Individuals who hold tenure in academic departments and are also appointed to administrative positions, however, continue to hold tenure in those departments.

Full-time administrators who also hold appointments in academic departments and engage in teaching and research may be recommended for tenure in such departments.

3.4.2 Pre-tenure Probationary Period and Reviews of Progress Toward Promotion and/or Tenure

Pre-tenure probationary period: The term "probationary period" ("pre-tenure") is applied to the succession of term appointments that an individual undertakes on a full- or part-time regular faculty appointment, and during which continued evaluation for reappointment and for an eventual tenured appointment takes place. The probationary period for faculty members on term appointments begins on either July 1 or August 10 of the calendar year in which their initial full-time appointment begins, depending on whether they are on a calendar year or academic year appointment, regardless of the month in which their services are initiated. (The probationary period for new faculty appointed for spring semester begins the following fall even though the spring contract period officially begins December 25.)

The initial appointment for assistant professors, associate professors, and professors employed without tenure is ordinarily a period of no less than two years. Multiple-year reappointment may be subsequently recommended.

The maximum total period for full-time probationary appointments is six years, unless an approved extension is granted. Decision about tenure, if not made earlier, is made in the sixth year (mandatory year) of the probationary appointment. If the tenure decision made in the sixth year is negative, a one-year terminal appointment is offered.
Up to three years of appropriate service at other accredited four-year colleges and universities may be credited toward the six-year probationary period, as specified in chapter three, “Guidelines for the Calculation of Prior Service.”

A faculty member on a probationary appointment who wishes to request a leave of absence should consult with their department head or chair about the effect of the leave on the probationary period, taking into account the professional development that the leave promises. The request for leave should address this matter. The provost’s approval of the request specifies whether the leave is to be included in the probationary period.

Pre-tenure faculty members may request a term part-time appointment as described in chapter three, “Part-Time Tenure-Track and Tenured Appointments,” for reasons of balancing work and family or personal health issues. In such cases, the probationary period is extended proportionately. For example, two years of service at 50 percent count as one year of full-time service. The term appointment may be renewed. (A permanent part-time appointment may be requested and granted following award of tenure.)

In determining the mandatory tenure review year for those with partial appointments, general equivalency to full-time appointments is expected, so that approximately five years of full-time equivalent service is expected prior to the mandatory tenure review year if no tenure clock extensions are granted, six years if one year of extension is granted, and seven years if two extensions are granted. (In summing partial years of service, a total resulting in a fraction equal to or less than 0.5 is rounded down, and a fraction greater than 0.5 is rounded up.) However, review for tenure must occur no later than the tenth year of service, resulting in somewhat less full-time equivalent service (4.5 years) for a faculty member with 50 percent appointment throughout all nine probationary years prior to review. If a faculty member is denied tenure following a mandatory review, a one-year terminal appointment is offered.

Faculty members on part-time appointments may request a tenure clock extension in accordance with chapter three, “Probationary Period Extensions (Extending the Tenure Clock).” (Extensions are granted in one-year increments, not prorated by the part-time appointment percentage.) However, the extension is not approved if it results in a mandatory review date beyond the tenth year.

Pre-tenure reviews: Under usual circumstances, departmental promotion and tenure committees review the professional progress and performance of pre-tenure faculty members two times during the probationary period, usually in their second and fourth or third and fifth years. The timing of the reviews depends upon the nature of the faculty member’s discipline and must be clearly indicated in written department policies. The terms of offer identify the initial appointment period. Pre-tenure reviews may be delayed if there is an approved extension as described above. Changes or variations in the standard review cycle must be documented in writing.

Reviews are substantive and thorough. At minimum, departmental promotion and tenure committees must review the faculty member’s relevant annual activity reports, peer evaluations of teaching, authored materials, or other artifacts of scholarship or creative activity. It is strongly suggested that promotion and tenure committees and pre-tenure faculty use the promotion and
tenure dossier format (available on the provost’s website) to organize and present information for review.

The pre-tenure reviews should analyze the faculty member’s progress toward promotion and/or tenure and offer guidance regarding future activities and plans. All reviews must be in writing, with the faculty member acknowledging receipt by signing and returning a copy for their departmental file. In addition, the promotion and tenure committee chair and the department head or chair meet with the faculty member to discuss the review and recommendations. Faculty members are also encouraged to seek guidance and mentoring from senior colleagues and the department head or chair. Pre-tenure faculty members bear responsibility for understanding and meeting departmental expectations for promotion and/or tenure.

The initial review for a part-time faculty member should occur no later than the third year of service (regardless of percent of employment) to give early feedback on their progress. At least two reviews should be conducted for part-time faculty members during their probationary period; more are recommended. The anticipated schedule for such reviews for reappointment and for the mandatory review for tenure should be documented in writing as part of the agreement for the part-time appointment. Changes should be agreed upon and documented by the faculty member and department.

In the fall semester prior to applying for tenure in a non-mandatory year, a candidate must inform the head or chair of their intention to apply, thereby giving the department time to conduct an additional review of the candidate’s progress, if such a review is deemed necessary. The extent of this review is determined by each department or school.

**Review of progress toward promotion to professor:** At least one review of progress toward promotion to professor should be conducted three to five years after promotion and tenure is awarded (or after tenure is awarded at the current rank of associate professor). The review—required for faculty promoted and tenured during 2012–13 and thereafter—is to be substantive and thorough. At minimum, an appropriate departmental committee (e.g., promotion and tenure committee, personnel committee, annual review committee) must review the faculty member’s relevant annual activity reports, peer evaluations of teaching, and authored materials since promotion. The faculty member may wish to complete a draft promotion dossier (using the format available on the provost’s website) to organize and present information for review.

The review should be developmental and recommend future activities and plans that will position the faculty member for promotion to professor. All reviews must be in writing, with the faculty member acknowledging receipt by signing and returning a copy for their departmental file. In addition, the faculty member may request a meeting with the promotion and tenure committee chair and the department head or chair to discuss the review and recommendations. Faculty members are also encouraged to seek guidance and mentoring from senior colleagues and the department head or chair.

There is no specification for minimum or maximum time of service in the rank of associate professor with tenure. Consideration for promotion to professor may be requested of the department head or
chair by a faculty member at any time. However, in the fall semester prior to applying for promotion to professor, a candidate must inform the head or chair of their intention to apply, thereby giving the department time to conduct a review of the candidate’s progress, if such a review is deemed necessary. The extent of this review is determined by each department or school.

3.4.2.1 Probationary Period Extensions (Extending the Tenure Clock)

Upon application, a one-year probationary period extension is automatically granted to either parent (or both, if both parents are tenure-track faculty members) in recognition of the demands of caring for a newborn child or a child under five newly placed for adoption or foster care. An extension may also be approved on a discretionary basis for other extenuating non-professional circumstances that have a significant impact on the faculty member’s productivity, such as a serious personal illness or major illness of an immediate family member. In rare cases, extraordinary professional circumstances not of the faculty member’s making may be acceptable justification for an extension, for example exceptional delays in procuring critical equipment, laboratory renovations, or other elements of the committed start-up package essential to establishing a viable research program.

Faculty members who utilize this policy are expected to fulfill their usual responsibilities during the probationary period extension unless they are also granted a period of modified duties or unless other arrangements are made (see chapter three, “Modified Duties”).

Probationary period extensions are granted in one-year increments. A cumulative total of two years is usually the maximum probationary period extension for any combination of reasons. Requests should be made within a year of the qualifying event (such as the arrival of a child in the family) or extenuating circumstance (such as an illness). The provost may approve exceptions to these limitations.

Requests for a probationary period extension are submitted in writing to the department head or chair. (A form is available on the provost’s website.) Documentation of medical reasons (other than childbirth or adoption) is required prior to approval, and documentation of other extenuating circumstances may also be required. Approvals by the department head or chair, dean, and provost are required for probationary period extensions. The faculty member may appeal denial of the request to the next higher level in their organizational reporting structure.

Regardless of when a candidate granted a probationary term extension applies for tenure—prior to their original mandatory year, in their original mandatory year, or in their extension year—it is very important that all individuals and committees participating in tenure reviews understand that the candidate must be held to the same standard, not a higher or more stringent one, as candidates without such an extension.

A probationary extension usually extends the time frame for each subsequent review and reappointment during the probationary period. For example, an extension granted prior to the fourth year review and reappointment typically delays that review by one year.
3.4.3 Guidelines for the Calculation of Prior Service

At the time of the initial appointment, the department head or chair notifies the new faculty member of their standing regarding the tenure system, including when the appointment will be considered for renewal and the length of the probationary period until mandatory consideration for tenure must be given.

Credit for prior service toward the probationary period may be granted for appropriate service in another accredited four-year college or university but only if the faculty member requests such credit. In such a request, the faculty member presents all prior service undertaken after the completion of the terminal degree appropriate to the field. A maximum of three years may be credited toward probationary service at Virginia Tech. The request must be made in writing within one year of the initial appointment. The specification of credit for prior service toward the probationary period is subject to the approval of the provost on the recommendation of the department head or chair and the dean.

3.4.4 General Expectations for Promotion and/or Tenure

In accordance with their assignments and as outlined in the “Virginia Tech Guidelines for Promotion and Tenure Dossier” document available from the provost’s office, candidates for promotion and/or tenure will be evaluated in the following categories: teaching, scholarship, and service. While candidates are not expected to have equal levels of commitment or equal responsibilities in all of these areas, scholarship is expected of all tenure-track faculty to a degree and in a discipline appropriate for their assignment.

Teaching (Includes advising/mentoring): Teaching is a multifaceted activity that includes formal and informal advising/mentoring. In any assessment of a candidate for promotion and/or tenure, both the quality and the quantity of the individual’s achievements in teaching and advising/mentoring should be considered. Those evaluating candidates for promotion and/or tenure should give special consideration to teaching effectiveness: faculty must demonstrate the ability to evaluate scholarship applicable to their field and effectively teach their discipline to students.

Scholarship (Includes research, creative activities, and extension activities): Scholarship, broadly defined at Virginia Tech as the discovery, transmission, and/or application of knowledge, takes many forms, including but not limited to research, creative activity, and extension activity. While both the quality and quantity of a candidate’s achievements should be examined, quality should be the primary consideration. Quality should be defined largely in terms of the work’s importance in the progress or redefinition of a field or discipline, the establishment of relationships among disciplines, the improvement of practitioner performance, or the creativity of the thought and methods behind it. To be awarded tenure, in addition to demonstrating productivity as a scholar, a candidate must provide evidence that their scholarship has growing impact nationally or internationally and the potential for greater impact in the future. Promotion to the rank of professor requires evidence of ongoing or renewed productivity and the realization of a candidate’s potential for greater impact nationally or internationally, including a description of how their scholarship has influenced their field.
Service (Includes engagement, university service, professional service, medical service, inclusion and diversity, and additional outreach and extension activities): In the spirit of Ut Prosim (That I may serve) and the land-grant mission, faculty are expected to use their knowledge, creativity, and expertise to improve the human condition and engage the communities of which they are a part. Candidates must demonstrate their contributions to the governance, development, and vitality of the university, their academic professions, and other relevant communities at the local, state, national, and/or international level. The quality and effectiveness of healthcare delivery and outreach and extension activities that are not considered scholarship should also be documented.

Evaluators must consider the unique features of every candidate’s department, discipline, and assignment. Therefore, as part of their promotion and/or tenure guidelines (see Chapter 3, “Promotion and Tenure”), each department (or college, when college-wide guidelines are applied) is required to have an “Expectations and Indicators for Promotion and/or Tenure” section that accounts for disciplinary and programmatic differences unique to and within the department(s) and specifies what is required of their faculty members to fulfill the general expectations outlined above. Departments or colleges should carefully assess and state the overall standards of professional performance and contribution they consider minimally acceptable for the conferral of promotion and/or tenure. These expectations must be adhered to by evaluators at every stage of the promotion and/or tenure process. Colleges that adopt a college-wide set of promotion and/or tenure guidelines will ensure that the “Expectations and Indicators for Promotion and/or Tenure” section accounts for differences within and across departments and schools.

Since expectations can change, tenure candidates will be evaluated according to the expectations and indicators in effect at the time of their appointment. Candidates for promotion to professor will be evaluated according to the expectations and indicators in place at the time of their application for promotion.

Besides professional criteria, evaluation for promotion and/or tenure should include consideration of the candidate’s integrity, professional conduct, and ethics. To the extent that such considerations are factors in reaching a negative recommendation, they must be documented as part of the formal review process and included in the candidate’s notification.

Every faculty member should maintain a current curriculum vitae, with copies filed in the department and college (or equivalent academic units, as appropriate). The candidate prepares a dossier that includes an executive summary; the candidate’s statement; documentation of performance in the areas of teaching, scholarship, service, and other activities relevant to the candidate’s assignment; and a list of work under review or in progress. The dossier is completed by the inclusion of recommendation statements, both internal and external, which are added as the dossier is reviewed at the department and college levels. For faculty who present significant interdisciplinary or multidisciplinary teaching, research, outreach, or extension activities as part of their record, the dossier should include one evaluation letter from the director, coordinator, or leader of the interdisciplinary or multidisciplinary program.

The promotion and tenure guidelines and a standard dossier cover page are available on the provost’s website. All candidate dossiers must be submitted to the University Promotion and Tenure
Committee according to the guidelines on the provost’s website. The department head or chair, or the department committee, are responsible for ensuring that the dossier conforms to these guidelines.

Candidates who apply for tenure prior to the mandatory year of application must be evaluated by the same standard—not a higher or more stringent one—as candidates who apply in their mandatory year. A candidate who applies for tenure prior to their mandatory year but receives a negative decision can apply again in their mandatory year.

The criteria by which faculty with part-time appointments are evaluated for tenure are the same as the criteria by which full-time faculty are evaluated. Promotion and tenure committees consider years of full-time equivalent service when reaching decisions, excluding any approved probationary period extensions granted under the extending the tenure clock policy.

### 3.4.4.1 Department Evaluation for Promotion and/or Tenure

**Determination of Candidates:** In their promotion and/or tenure guidelines, each department will have a process for determining which candidates are to be considered for promotion and/or tenure, including those faculty members in the sixth year of probationary service. Candidates should be identified in the fall semester one year prior to applying for promotion and/or tenure.

**Department Committee Composition:** Each department must have one or more committees with appropriate faculty representation to evaluate candidates for promotion and tenure, tenure at the currently held rank, and promotion to professor, and make recommendations to the department head or chair. While the process of selecting committees may vary between departments, significant elements of faculty choice, as determined through departmental governance, must be part of the selection process. Some possible methods for committee selection include a combination of elected and appointed representatives; an elected slate significantly larger than the committee size, allowing the department head or chair to appoint the committee from the slate; or a committee elected by the faculty. A minimum committee size of five members is most appropriate in order to achieve adequate representation and effectiveness of committee operations.

**Department Committee Evaluation of Candidate:** The committee chair or department head or chair furnishes the committee with a dossier for each candidate. After evaluating each candidate’s dossier on the basis of criteria established in the “Expectations and Indicators” section of the department’s promotion and/or tenure guidelines, the committee votes and writes a recommendation letter for each candidate, including the division of the vote. The committee’s letter contains the evaluation of the candidate’s performance in each relevant area and provides a recommendation for promotion and tenure, tenure at the currently held rank, or promotion to professor. In the absence of a unanimous recommendation by the committee, the division of the vote must be explained. A minority letter may be attached to the committee’s recommendation letter. All letters must be sent to the head or chair and become part of the dossier.

Given their responsibility to make a separate and independent recommendation on each case, department heads or chairs (or school directors) may not serve as members of department committees: program directors or area chairs may. A department head or chair may convene the
committee, charge the committee with its responsibilities, and discuss the cases. However, subsequent to the discussions with the department head or chair, the committee must discuss the merits of the candidates, frame its recommendations, and take the final vote without the head or chair in attendance and without influence by the head or chair.

**Department Head or Chair Evaluation of Candidate:** The head or chair evaluates each candidate’s dossier, including the committee’s letter, on the basis of criteria established in the “Expectations and Indicators” section of the department’s promotion and/or tenure guidelines and writes a recommendation letter for each candidate. The head’s or chair’s letter, which may draw from the committee’s letter(s) or letters, contains the evaluation of the candidate’s performance in each relevant area and provides a recommendation for promotion and tenure, tenure at the currently held rank, or promotion to professor. The letter from the head or chair becomes part of the dossier and should follow the guidelines established by the provost, which are available on the provost’s website. If the recommendation for promotion and/or tenure varies from the department committee’s, reasons for that variance must be specified, including references to the department’s “Expectations and Indicators.” The department head or chair will share their letter with the department promotion and tenure committee as soon as it is available.

In cases of mandatory (final year of probationary service) tenure decisions, the head or chair sends the dossier of every candidate to the dean, even when both the head or chair and the committee have made negative recommendations. In all other cases, the head or chair sends the dossier of every candidate to the dean, except if the committee’s recommendation is negative and the head or chair concurs. Under those circumstances, the head or chair declares a final decision and no further review is carried out.

The dossiers that the head or chair sends to the dean are accompanied by a statement describing the formation and procedures of the department committee and a summary of the number of candidates considered by the committee in each category (mandatory tenure, non-mandatory-year tenure, and promotion at each rank). The division of the department committee’s vote must be added to the dossier, but otherwise remains confidential.

**3.4.4.2 College Evaluation for Promotion and/or Tenure**

**College Committee Composition:** Each college must have a committee with appropriate faculty representation to review the recommendations sent by department heads or chairs. While the process of selecting committees may vary between colleges, rules governing eligibility and selection of college committee members and the committee chair, as well as operating guidelines for the committee’s deliberations, must be documented and formally approved by the faculty. Significant elements of faculty choice must be part of the selection process. Some possible methods for committee selection include election by the college faculty; appointment by an elected college executive committee; a combination of elected and appointed (by the dean or college executive committee) representatives; or an elected slate significantly larger than the required committee size, thus allowing the dean or college executive committee to appoint the committee from the elected slate. Selection of the committee chair is determined in accordance with college policies,
approved by the faculty. However, given their responsibility to make a separate and independent recommendation on each case, the dean may not serve as chair of the committee.

As far as possible, each department within the college should be represented on the committee. The dean may appoint up to three tenured faculty members to serve on the college committee in order to assure appropriate representation of disciplines or very large departments, participation by members of underrepresented groups, or other critical considerations to help assure fairness of the process in both fact and perception. Appointments by the dean may not constitute more than a third of the committee’s total membership.

The committee may include department heads, chairs, or department-level promotion and tenure committee members. If department heads or chairs serve on college committees, their total number must be less than that of other faculty members.

The appointments of faculty members on the committee should be staggered to assure continuity from one year’s deliberation to the next. If possible, members should not serve more than two successive terms (three-year terms are typical).

The college faculty representatives to the University Promotion and Tenure Committee must attend college promotion and tenure deliberations as non-voting observers but should not participate or attempt to influence college-level recommendations.

**College Committee Evaluation of Candidate:** The committee reviews the cases of all candidates recommended by the department committee and/or head or chair as well as cases of mandatory tenure receiving negative recommendations by both a department committee and a head or chair.

The purposes of the review are to verify that the department recommendations for promotion and/or tenure are consistent with the evidence, reflect college-wide standards, and conform to the college’s expectations of the candidate’s future success.

After the review, the committee votes and writes a recommendation letter for each candidate that summarizes its evaluation, including the division of the vote. If the recommendation for promotion and/or tenure varies from that received from the department committee or the department head or chair, reasons for that variance must be specified, including references to the “Expectations and Indicators” section of the relevant department’s promotion and/or tenure guidelines. In the absence of a unanimous recommendation by the committee, the division of the vote must be explained. A minority letter may be attached to the committee’s recommendation letter. All letters must be sent to the dean and become part of the dossier.

If the committee includes department heads, chairs, or department-level promotion and tenure committee members, none of these members may vote on cases from their departments, since each has already had an opportunity to vote or make a recommendation on those candidates. The dean does not vote on committee recommendations.
The college committee may ask the department head or chair, the candidate, and/or a representative(s) of the department committee to appear before the college committee to present additional information or clarify recommendations.

The dean may participate in committee discussions and serve in an advisory capacity to the committee to ensure compliance with college and university procedures and fair and equitable treatment of candidates. However, subsequent to the discussions with the dean, the committee must discuss the merits of the candidates, frame its recommendations, and take the final vote without the dean or other college-level personnel in attendance and without influence by the dean.

**Dean's Evaluation of Candidate:** The dean reviews the cases of all candidates considered by the college committee. The purpose of the dean’s review is to verify that the department and college committee recommendations for promotion and/or tenure are consistent with the evidence, reflect college-wide standards, and conform to the college’s expectations of the candidate’s future success.

The dean writes a separate recommendation letter for every case sent to the provost. If the dean’s recommendation for promotion and/or tenure varies from the college committee’s, reasons for that variance must be specified, including references to the “Expectations and Indicators” section of the relevant department’s promotion and/or tenure guidelines. In instances of concurrence, the dean’s letter may include additional points not raised in earlier evaluations. The dean will share their letter with the committee and add it to the dossier.

For every promotion and/or tenure case (whether mandatory tenure, non-mandatory-year tenure, and/or promotion), if either the college committee’s or the dean’s recommendation is positive, the dossier is sent to the provost. If the college committee’s recommendation is negative and the dean concurs, the dean declares a final decision and no further review is carried out.

The dossiers that the dean sends to the provost must be accompanied by a statement describing the formation and procedures of the college committee and a summary of the number of candidates considered by the committee in each category (mandatory tenure, non-mandatory-year tenure, and promotion at each rank). The division of the college committee’s vote must be added to the dossier, but otherwise remains confidential.

### 3.4.4.3 University Evaluation for Promotion and/or Tenure

While the details of the procedures followed by the University Promotion and Tenure Committee are maintained on the provost’s website (see "Promotion and/or Tenure Procedures for University Committee Deliberations and Notifications"), those procedures are derived from the policies and standards presented below and must conform to the Faculty Handbook.

**University Promotion and Tenure Committee Composition:** The University Promotion and Tenure Committee is appointed and chaired by the provost. The committee is composed of the
academic deans, a tenured faculty representative from each of the colleges, a tenured faculty member-at-large, and the provost. The faculty subcommittee of the University Promotion and Tenure Committee includes the college faculty representatives plus the faculty member-at-large. The provost, who is a non-voting member, chairs both the full committee and faculty subcommittee. The vice provost for faculty affairs serves as resource and scribe for committee deliberations.

Significant elements of faculty choice must be part of the selection of the faculty subcommittee; therefore, each college faculty, through means deemed suitable by them, nominates two faculty members for each vacancy, from which the provost selects one. The Faculty Senate nominates two faculty members for the at-large appointment, from which the provost selects one. The selection of the faculty members should be based on demonstrated professional excellence. The faculty members of the committee hold rotating terms of three years. Regardless of the size of the committee, the faculty must always have a majority of the potential votes.

Guidelines for submission of candidates’ dossiers are available on the provost’s website.

**University Promotion and Tenure Committee Evaluation of Candidate:** The committee reviews the qualifications of each candidate recommended for promotion and/or tenure by the college committee or the dean.

The purposes of the review are to verify that the recommendations for promotion and/or tenure are consistent with the evidence, reflect university-wide standards, and conform to the university’s expectations of the candidate’s future success.

The faculty subcommittee initially discusses all the cases with the provost in attendance. Committee members provide a brief summary of the cases from their college to begin the committee discussion, though they are not expected to champion or defend cases. Subsequent to the discussions with the provost, the faculty subcommittee must be given a period of time to discuss the cases in the absence of the provost and all other university-level personnel. The provost then rejoins the subcommittee and asks the faculty to rate the cases in order to identify those they would like to discuss further with the deans. Deans are informed of which cases the faculty subcommittee would like to discuss further and the particular concerns the subcommittee has in each case.

The full committee then convenes. The deans present information based on faculty subcommittee concerns. The committee then rates the cases to clarify which cases require further discussion. Deans abstain from rating the candidates in their colleges, as the dean’s statement, which is included in the dossier, serves as their estimation of the case’s strength. The provost shares the result of the rating, after which the full committee discusses the cases. The committee adjourns and reflects upon the group discussion.

Upon reconvening, the provost invites committee members to comment upon any case. The full committee then votes, with deans abstaining from voting on candidates from their colleges. Similarly, faculty members serving on the committee do not vote on any case on which they previously voted.
The vote must occur through secret ballot. Though the provost shares the result of the vote with the committee, committee members must keep the results confidential. The majority vote of the committee reflects either a positive or negative recommendation to the provost. A tie vote is considered a negative recommendation.

If the recommendation for promotion and/or tenure varies from that received from the department or college, reasons for that variance must be specified, including references to the “Expectations and Indicators” section of the relevant department’s promotion and/or tenure guidelines.

Whether positive or negative, the provost forwards the committee’s recommendation to the president, including the division of the vote.

**Provost’s and President’s Evaluation of Candidates:** The provost makes recommendations to the president, informing the committee of those recommendations. If the provost’s recommendation for promotion and/or tenure on any case varies from that received from the University Promotion and Tenure Committee, reasons for that variance must be specified, including references to the “Expectations and Indicators” section of the relevant department’s promotion and/or tenure guidelines.

The president makes recommendations for promotion and/or tenure to the Board of Visitors from among those candidates reported by the provost, with the Board of Visitors being responsible for the final decision.

**3.4.4.4 Candidate Notification**

As a promotion and/or tenure case proceeds, the candidate must be notified in writing of the recommendations made by each committee and administrator.

Any negative recommendations, whether by a committee or administrator, must include all substantive reasons for that recommendation, including references to the “Expectations and Indicators” section of the relevant promotion and/or tenure guidelines, as well as options for appeal. While notification letters may include excerpts from committee or administrator letters, they cannot include the results of any votes, the names of external evaluators, or statements from their evaluations.

The department head or chair notifies the candidate of the department committee’s and the head’s or chair’s recommendations to the college. The dean notifies the candidate of the college committee’s and the dean’s recommendations to the provost. The provost notifies the candidate of the University Promotion and Tenure Committee’s and the provost’s recommendations to the president. Notification will take place within 10 university business days of the completion of the committee’s and administrator’s deliberations.

In cases with a negative recommendation from the provost, the University Promotion and Tenure Committee, or both, the provost does not forward the case to the president until the candidate has had time to appeal.
In cases with a final positive recommendation by the president, the provost notifies the candidate in writing that their case has been recommended by the president to the board of visitors for approval. In cases with a final negative recommendation by the president, the provost notifies the appropriate dean, who informs the candidate in writing of the reasons for the decision.

3.4.5 General Guidelines for Appeals of Decisions on Reappointment, Promotion, and/or Tenure

A faculty member who is notified of a negative decision following evaluation for a term reappointment during the probationary period, for a tenured appointment, or for promotion may appeal for review of the decision under conditions and procedures specified in this section. The appellant has a right to an explanation of the reasons for the denial. An appeal must be filed in writing within 10 university business days of formal notification of the decision, which shall explain the appeal procedures.

An appeal can be based on the following claims only: department criteria established in the “Expectations and Indicators” section of the relevant department’s promotion and/or tenure guidelines were not appropriately applied; material from the dossier was unavailable to or disregarded by reviewers through no fault of the candidate; or information in the dossier was not considered in a fair and objective manner.

Additionally, faculty have the option to grieve procedural violations of the promotion and tenure process—including violations of the appeal process presented in this section—after a negative decision on an appeal or instead of filing an appeal in the first place. Since the grievance procedures allow the grievant to state both the grievance they believe they have experienced and the relief they seek, it has a wider range of possible outcomes than the appeal process. However, because it is a slower process that may not be completed until the promotion and/or tenure cases in a given year have been decided, and because faulty cannot grieve “items falling within the jurisdiction of other university policies and procedures,” a grievance should be thought of as a means for faculty to seek an outcome they cannot seek through the appeal process. The grievance process is described in chapter three, “Faculty Grievance Policy and Procedures.”

Administrators and committees hearing an appeal must limit the scope of their recommendations to the grounds presented above: in particular, they must not substitute their own judgment on the merits of the case for that of the body or individual responsible for the decision under appeal. The recommendations should address the allegations in the appeal with specificity and cite appropriate evidence.

A faculty member can appeal the decision at more than one level. There is no appeal of the president’s recommendation to the Board of Visitors or the board’s final decision.

Appeals should be resolved as quickly as possible without compromising fairness or thoroughness of review. Whenever possible, the appeal should be resolved in time to accommodate the first meeting of the Board of Visitors in the fall semester.
A faculty member with questions or concerns about the appeal process or who believes that the procedures described in this section have been improperly followed may, at any point, seek advice from the Faculty Senate Committee on Reconciliation.

3.4.5.1 Appeal of Probationary Reappointment Decision

Faculty members on probationary term appointments should make no presumption of reappointment. The department head or chair with the advice of the departmental personnel committee or the faculty development committee determines non-reappointment. Notice of non-reappointment is furnished according to the schedule in chapter two, “Retirement, Resignation, and Non-Reappointment.” The specific reasons for the decision are provided to the faculty member in writing.

If the decision is based primarily on evaluation of the faculty member’s performance, including perceived lack of potential for further professional development, then the faculty member may appeal the decision to the dean of the college. If the dean sustains the departmental decision, the faculty member may request, through the dean, the further and independent review of the decision by the properly constituted college committee on promotion and tenure.

The faculty member presents the appeal in writing as specified in chapter three, “Appeals of Decisions on Reappointment, Tenure, or Promotion.” The faculty member has the right to appear before the committee to present arguments. The college committee makes recommendation to the dean, who informs the faculty member of the committee’s recommendation and the dean’s subsequent decision. The dean’s decision closes the appeal process, unless it varies from the college committee’s recommendation, in which case the faculty member may appeal to the provost for a final decision.

3.4.5.2 Appeal of Promotion and/or Tenure Decision

Appeal of negative department or college decisions: Because all mandatory tenure cases, even those given a negative recommendation by the department committee and the head or chair, receive a full college level review, there is no appeal of a negative tenure decision at the department level.

With all non-mandatory cases, whether promotion and/or tenure, if the committee and the relevant administrator both make negative recommendations, the candidate may appeal that negative decision to the next level in the process. The faculty member has the right to appear before the committee considering the appeal and present arguments.

If either the college committee or the dean grants the appeal of a negative department decision, the case resumes normal consideration, beginning with the college committee and dean. If either the University Promotion and Tenure Committee or the provost grants the appeal of a negative college decision, the case resumes normal consideration, beginning with the University Promotion and Tenure Committee and the provost. At either the college or university level, if the committee and the relevant administrator both make negative recommendations, the appeal is denied and no further appeal is provided.
**Appeal of negative university decisions:** Because all recommendations from the University Promotion and Tenure Committee and the provost are forwarded to the president, candidates may appeal negative recommendations of either or both to the Faculty Review Committee. The faculty member has the right to appear before the committee to present arguments. The Faculty Review Committee investigates the case and makes a recommendation to the president.

The president's recommendation to the Board of Visitors, and the Board of Visitors' final decision, cannot be appealed.

**Table of appeal options for promotion and/or tenure cases:** The following table provides a summary of the progression of cases (whether promotion and tenure, tenure only, or promotion only) that receive negative recommendations from either a committee, administrator, or both, including appeal options. This table is for reference only.

<table>
<thead>
<tr>
<th>Decision</th>
<th>Next Step</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative recommendation by department committee and by department head or chair (all but mandatory tenure cases)</td>
<td>May appeal to college committee (through the dean)</td>
</tr>
<tr>
<td><strong>Appeal granted by the college committee and/or dean,</strong></td>
<td>Moves to college committee and dean for normal consideration of the case</td>
</tr>
<tr>
<td>Negative recommendation by department committee and by department head or chair (mandatory tenure cases only)</td>
<td>Moves to college committee and dean</td>
</tr>
<tr>
<td>Negative recommendation by department committee; positive recommendation by department head or chair</td>
<td>Moves to college committee and dean</td>
</tr>
<tr>
<td>Positive recommendation by department committee; negative recommendation by department head or chair</td>
<td>Moves to college committee and dean</td>
</tr>
<tr>
<td>Negative recommendation by college committee and dean; positive recommendation by dean</td>
<td>May appeal to University Promotion and Tenure Committee and provost for normal consideration of the case</td>
</tr>
<tr>
<td><strong>Appeal granted by the University Promotion and Tenure Committee and/or provost,</strong></td>
<td>Moves to University Promotion and Tenure Committee and provost for normal consideration of the case</td>
</tr>
<tr>
<td>Negative recommendation by college committee; positive recommendation by dean</td>
<td>Moves to University Promotion and Tenure Committee and provost</td>
</tr>
<tr>
<td>Positive recommendation by college committee; negative recommendation by dean</td>
<td>Moves to University Promotion and Tenure Committee and provost</td>
</tr>
<tr>
<td>Negative recommendation by the University Promotion and Tenure Committee and/or provost</td>
<td>May appeal to Faculty Review Committee—recommendation is advisory to the president.</td>
</tr>
<tr>
<td>Negative recommendation by president</td>
<td>No appeal</td>
</tr>
<tr>
<td>Negative decision by the Board of Visitors</td>
<td>No appeal</td>
</tr>
</tbody>
</table>

**3.7.4 Valid Issues for Grievance**

For this process, a grievance is defined as a complaint by a faculty member alleging a violation, misinterpretation, or incorrect application of a policy, procedure, or practice of the university that
directly affects the grievant. Some examples of valid issues for filing a grievance are: improperly or unfairly determined personnel decisions that result in an unsatisfactory annual performance evaluation; unreasonable merit adjustment or salary level; excessive teaching load/work assignments; violations of promotion and tenure procedures, including the appeal process (see appeal process in chapter three, “Appeals of Decisions on Reappointment, Tenure, or Promotion”); reprisals; substantive error in the application of policy; and matters relating to academic freedom.

**Issues not open to grievance:** While most faculty disputes with the university administration may be dealt with by this grievance policy, the following issues may not be made the subject of a grievance: determination of policy appropriately promulgated by the university administration or the university governance system; those items falling within the jurisdiction of other university policies and procedures (for example, complaints of unlawful discrimination or harassment, or an appeal of a promotion and/or tenure decision based on the grounds presented in chapter three, “General Guidelines for Appeals of Decisions on Reappointment, Promotion, and/or Tenure”); the contents of personnel policies, procedures, rules, regulations, ordinances, and statutes; the routine assignment of university resources (e.g., space, operating funds, parking, etc.); usual actions taken, or recommendations made, by administrators or committee members acting in an official capacity in the grievance process; termination of appointment by removal for just cause, non-reappointment, or abolition of position; or allegations of misconduct in scholarly activities.

### 1.2.5.2 Faculty Review Committee

The functions of the Faculty Review Committee are: to provide faculty review of faculty grievances, to evaluate procedural concerns raised by faculty serving on promotion and tenure committees, and to consider appeals in the promotion and tenure or continued appointment process when the provost does not concur with a positive recommendation from the University Committee on Promotion and Tenure (see chapter three, “Appeals of Decisions on Reappointment, Tenure, or Promotion”) or the University Committee on Promotion and Continued Appointment (see chapter four, “Appeals of Decisions on Reappointment, Continued Appointment, or Promotion”).
RESOLUTION TO REVISE CHAPTER FIVE OF THE FACULTY HANDBOOK:
Employment Policies and Procedures for Non Tenure-Track Faculty

WHEREAS, faculty members on the collegiate professor track have asked for clarification of the guidelines relevant to their employment series, particularly those regarding the appropriate range of duties and expectations for promotion; and

WHEREAS, based upon the shared belief of the Faculty Senate and the Office of the Provost that a revision to the collegiate faculty sections of chapter five in the Faculty Handbook was warranted, a Commission on Faculty Affairs working group, comprised mostly of collegiate faculty, was formed for this purpose; and

WHEREAS, the working group sought to simplify and standardize procedures, clarify and update requirements, and ensure the equitable treatment of faculty while maintaining Virginia Tech’s high academic standards; and

WHEREAS, changes to the university’s promotion and tenure guidelines needed to be carried over to the promotion guidelines for non-tenure-track faculty; and

WHEREAS, the Commission on Faculty Affairs has periodically presented the revision to the Faculty Senate and department heads/chairs and incorporated many of the suggestions these groups have offered; and

WHEREAS, the Faculty Senate and the Office of the Provost believe that the revision, which includes clarification of the duties for faculty members on the collegiate professor track and changes to the requirements for departmental guidelines for the promotion of non-tenure-track faculty, improves upon the existing guidelines;

NOW, THEREFORE BE IT RESOLVED, that the Faculty Handbook be revised according to the text included in Appendix 1; and

BE IT FURTHER RESOLVED, that these revised guidelines will become effective beginning with faculty considered for promotion during the 2022-2023 academic year.

RECOMMENDATION:

That the Board of Visitors approve this resolution to revise chapter five of the university’s Faculty Handbook.

March 22, 2021
Appendix 1: Full text of Chapter 5 revision

5.0 Employment Policies and Procedures for Non-Tenure-Track Instructional Faculty

The following policies address specific aspects of non-tenure-track instructional faculty appointments. Non-tenure-track faculty members fill critical roles in the learning, discovery, and engagement missions at Virginia Tech. They complement the qualifications and contributions of tenure-track faculty, provide access to specialized faculty resources, and allow flexibility to address programmatic needs. As valuable contributors to departmental and institutional missions, they are entitled to fair treatment and compensation, access to professional development opportunities, recognition for their accomplishments, and participation in the life of the university community.

Academic departments retain the authority to decide whether to employ non-tenure-track faculty to deliver aspects of their instructional program and will maintain Promotion Guidelines (see chapter three, “Promotion and Tenure”) that follow the university template and include all information regarding departmental procedures and expectations for reappointment, progress toward promotion, and the evaluation of non-tenure-track promotion cases. Nothing in these guidelines shall supersede or contradict the provisions of the Faculty Handbook. If a college elects to adopt guidelines that establish a college-wide standard for promotion of non-tenure-track faculty, departments may maintain a set of guidelines that interpret the college-wide standard within the context of the department’s disciplines and traditions. All guidelines will be approved by faculty (through department- and college-level governance), the college-level committee and the dean, and the provost’s office, and made available online. Revisions to these documents must also be approved by the faculty, the college, and the provost’s office.

Ordinarily a graduate or professional degree is required for appointment to one of these ranks. Appointments are made using established university search procedures. (See chapter two, “Faculty Search Processes,” and the Human Resources website.)

Tenure will not be awarded at any of these ranks and service at these ranks is excluded from the pre-tenure probationary period if the faculty member is subsequently appointed to a tenure-track position, except for visiting professors, whose full-time service may or may not be counted at the discretion of the faculty member.

In a few cases, faculty members with regular academic rank (assistant, associate, or full professor) hold non-tenure-track appointments because of unusual job responsibilities and historical lack of appropriate alternative ranks. Policies in this section also apply to those individuals.

All non-tenure-track faculty ranks provide for full- or part-time appointments.

5.1 Non-Tenure-Track Instructional Faculty Series

5.1.1 Visiting Professor

Appointment to the rank of visiting assistant, associate, or professor is for a restricted period to carry out learning, discovery, and engagement responsibilities within an academic department. Professional credentials required for the standard professorial ranks are required for appointment as a visiting assistant, associate, or professor. A visiting faculty member may not serve in such a position beyond six years. Tenure cannot be awarded to individuals in the visiting ranks.

In a few cases, faculty members with regular academic rank (assistant, associate, or full professor) hold non-tenure-track appointments because of unusual job responsibilities and historical lack of appropriate alternative ranks. Policies in this section also apply to those individuals.

Full-time service at this rank may or may not be counted as part of the pre-tenure probationary period if the faculty member is subsequently appointed to a tenure-track position. As with prior service credit from another institution, the decision to include all or some of the years of service from a visiting appointment is at the discretion of the faculty member. However, this decision must be
made at the time of appointment to the tenure-track position and documented as part of that initial contract.

5.1.2 Adjunct Professor

Appointment to the rank of adjunct assistant, associate, or professor is reserved for persons whose primary employment is with another agency, organization, educational institution, or with a non-instructional unit of the university. Adjunct professors are usually compensated as wage employees using the university's P14 form. Procedures for processing P14 actions are available on the Human Resources website.

Appropriate professional credentials are required for appointment as an adjunct assistant, associate, or professor. Appointments may be renewed annually. The professor of practice series titles may be used for wage adjunct faculty appointments in lieu of the adjunct assistant professor, associate professor, or professor titles, if appropriate for the assignment and credentials of the individuals. (See “Professor of Practice Series.”)

Adjunct faculty must present credentials appropriate to the level of the course they are teaching. It is the responsibility of the department to verify documentation of appropriate credentials for adjunct faculty members prior to the start of the course. (See chapter two, “Faculty Credentialing Guidelines,” or the provost’s website.)

If deemed qualified and appropriate by the host department, authorization for an adjunct faculty member to serve as principal investigator on a sponsored project may be requested. The department, with the approval of the dean, submits a written request for such authorization to the Office of the Vice President for Research and Innovation.

Wage adjunct faculty members do not typically submit an annual faculty activity report or have an annual evaluation because their employment is temporary. Although wage adjunct faculty may be hired repeatedly to teach a course or courses, they are not considered to be continuing faculty for the purposes of evaluation. Per course stipends paid to wage adjunct faculty are not fixed university-wide, but rather are determined on a departmental basis. Payments typically reflect the experience and credentials of the wage adjunct faculty member, the level of demand (market) for the necessary expertise, and general salary levels in the discipline.

5.1.3 Professor of Practice Series

For disciplines where professional preparation of students is a major goal, the involvement of experienced practitioners in teaching the skills and values of the profession, overseeing internships and project experiences, and career advising, for example, are a vital aspect of a successful program. Professional programs often have a deep commitment to the on-going continuing education of practitioners in the field, resulting in a greater commitment to delivery of outreach programs than is typical of a tenure-track appointment outside of Extension. Programs in the arts may wish to attract resident artists or performers for a period of time to contribute to the program. The professor of practice rank series may be appropriate in these and other roles that typically do not reflect the same range of responsibilities required for tenure-track faculty members.

The professor of practice series provides for non-tenure-track faculty appointments for individuals who bring specialized expertise to the instructional programs of the university, thereby complementing the qualifications and contributions of tenure-track faculty. (These rank titles may also be used for wage [P14] appointments in lieu of adjunct assistant, associate, or professor, if appropriate for the assignment and credentials of the individual.) Individuals appointed to these ranks are expected to be successful and effective professionals in a given field. They must be effective
teachers of the profession or discipline and they are expected to be able to understand and evaluate the research that applies to their field and teach it to students. While professor of practice faculty members may conduct research and present their findings in professional venues, there are no expectations for an extensive research program as is typical of tenure-track faculty appointments.

Professor of practice faculty members are expected to remain active in their professions in ways that contribute to their assignment—teaching, consulting, or outreach, serving in technical and professional societies and associations, and similar activities. Where appropriate to their assignment, they may interact with graduate or professional students and interns and serve on graduate committees. To chair a graduate committee, professors of practice must have a terminal degree, active involvement in research, and the approval of the academic unit and the graduate school. They may also be expected to serve on departmental, college, or university committees as contributing members of their departments and the broader university community.

Individuals appointed to a professor of practice rank must have a graduate or professional degree in the discipline (or a related discipline), professional certification(s) if relevant, and/or significant professional experience. Any appointment without the relevant terminal degree in the field must be certified by the department as appropriately credentialed for the faculty member's particular instructional assignment in accordance with guidelines for regional accreditation and university policy and procedures. Documentation supporting alternative credentials certification is required. Further information regarding appropriate credentials for the teaching faculty is found in chapter two, “Faculty Credentialing Guidelines,” and on the provost’s website.

A record of significant professional achievement is expected for appointment at the associate professor or professor level; initial appointments at such ranks require approval of the appropriate departmental committee and head or chair. Appointment to one of these ranks may be from one to five years and is renewable without limit.

Promotion within these ranks may be pursued through procedures outlined in this section.

**Assistant Professor of Practice:** Persons appointed at this rank have a graduate or professional degree in the discipline (or a related discipline), professional certification(s) if relevant, and/or significant professional experience. Experience and a demonstrated competence in practice of the profession are expected. Credentials must be relevant to the field and type of assignment.

**Associate Professor of Practice:** Persons appointed at the associate professor of practice rank have a graduate or professional degree in the discipline (or a related discipline), professional certification(s) if relevant, and/or significant professional experience. Credentials for appointment or promotion to this rank must document a record of significant professional experience and accomplishments relevant to the field and type of assignment.

**Professor of Practice:** Professor of practice is the capstone rank in the series. Appointment to this rank denotes distinguished professional achievement, and regional, national, or international prominence in the field. Credentials for appointment or promotion to this rank must document a record of significant professional experience and accomplishments relevant to the field and type of assignment. External validation of such accomplishments and leadership in the field is expected at the time of appointment or promotion.

### 5.1.4 Clinical Faculty Series

General college faculty members with responsibilities primarily in instruction and/or service in a clinical setting, such as veterinary medicine are considered clinical faculty. The following clinical faculty appointments are intended to promote and retain clinical educators and to complement the
The clinical faculty track provides for faculty appointments to individuals whose primary responsibilities are in clinical settings and in the instructional programs. While clinical faculty may conduct clinical research and present their findings in professional venues, there are no expectations for an extensive research program as is typical of tenure-track faculty appointments. The clinical faculty ranks include:

**Clinical Instructor:** Persons appointed to this rank must have the appropriate professional degree. Preference is given to individuals eligible for, or certified by, the most appropriate specialty college or organization recognized by the profession. Appointments at this rank are typically for one year and are renewable.

The clinical professor series is designed for clinical faculty members who have extended appointments and who are expected to interact with graduate or professional students, residents and interns, serving on committees or supervising their training. Appointment to one of these ranks may be from one to five years and is renewable without limit. Usually a national search is conducted for appointment at one of these ranks (or an approved exemption sought for exceptional skills or similar justification).

**Clinical Assistant Professor:** Persons appointed to this rank must have the appropriate professional degree and eligibility for, or certification by, the most appropriate specialty college recognized by the professional organization. Credentials shall be consistent with those for appointment to assistant professor, with an expectation for primary commitment to the instructional and clinical teaching setting.

**Clinical Associate Professor:** Persons appointed to this rank must have the appropriate professional degree and be a diplomate in the appropriate specialty college recognized by their professional organization. Credentials shall be consistent with those for appointment to associate professor, with an emphasis on clinical accomplishments.

**Clinical Professor:** Persons appointed to this rank must have the appropriate professional degree and be a diplomate in the most appropriate specialty college recognized by their professional organization. Credentials shall be consistent with those for appointment to professor, with an emphasis on clinical accomplishments.

Further detail on the duties and responsibilities of these ranks, criteria and the process for promotion, and the terms and conditions of employment for clinical faculty are established by the respective academic departments and approved by an appropriate college-level committee and the dean.

### 5.1.5 Collegiate Faculty Series

**Description of Collegiate Faculty Series**

The primary purpose of the collegiate professor series is to provide departments the opportunity to employ faculty whose principal focus is on excellence in instruction, including teaching, pedagogy, and curricular reform. While collegiate faculty also have scholarship and service roles as laid out below, the extent of a collegiate faculty member’s scholarly and service obligations will be balanced against their primary responsibility to focus on excellence in instruction. Collegiate faculty are expected to remain active in their disciplines in ways that contribute to their assignment. The following teaching, scholarship, and service parameters apply to collegiate faculty:

**Teaching:** The instructional involvement of collegiate professors can include but is not limited to classroom and online teaching, curricular updates, course transformations, and the adoption/integration of innovative and inclusive pedagogy. Working in collaboration with the
department’s other faculty, collegiate faculty may take a lead role in enhancing the curricula and promoting teaching excellence and must have a major commitment to the instructional missions of the department. Collegiate faculty may teach graduate courses.

Scholarship: Scholarship—broadly defined at Virginia Tech as the discovery, transmission, and/or application of knowledge—takes many forms, including but not limited to research, creative activity, and extension activity. Collegiate faculty will engage in the scholarship of teaching and learning and/or disciplinary topics and present the results in a forum or manner consistent with their assignment. While one collegiate faculty member may have an extensive disciplinary research assignment and be expected to present findings in professional venues, another may be expected to develop curricular innovations and present them for local consideration or adoption. Examples of scholarship include but are not limited to designing or participating in training or professional development grants; presenting research at regional, state, national, or international conferences; and publishing research in refereed scholarly and/or practitioner journals. Though some scholarship is expected of all collegiate faculty, there are no expectations that they will conduct the extensive research programs typical of tenure-track faculty appointments.

Service: Collegiate faculty members have significant roles in the governance, development, and vitality of the university and academic professions and may be expected to serve on departmental, college, or university committees; engage in outreach or extension activities; and serve in technical and professional societies and associations and similar activities.

At the time of their appointment or reappointment, given the variability of collegiate faculty assignments, contractual details outlined in the Terms of Faculty Offer (TOFO) will be supplemented by a written work assignment negotiated between the faculty member and the department head or chair.

Initial Appointment Within the Series

Initial appointment at the rank of Collegiate Assistant Professor requires experience and demonstrated competence in teaching and the potential for professional and/or scholarly achievement appropriate for the field and assignment. This is a three-year appointment.

Initial appointment at the rank of Collegiate Associate Professor requires evidence that a candidate has significant instructional experience and professional and/or scholarly achievements relevant to the field and type of assignment. This is a five-year appointment.

Initial appointment at the rank of Collegiate Professor, the capstone rank in the series, requires evidence of distinguished professional achievement; regional, national, or international prominence in the field; and significant instructional experience and scholarly accomplishments relevant to the field and type of assignment. This is a seven-year appointment.

Individuals appointed to any collegiate professor rank must have a terminal graduate or professional degree in the discipline (or a related discipline); professional certification(s), if relevant; and must be certified by the department as appropriately credentialed for their instructional assignment in accordance with guidelines for regional accreditation and university policy and procedures. Further information regarding appropriate credentials for the teaching faculty is found in chapter two, “Faculty Credentialing Guidelines,” and on the provost’s website.

All appointments are renewable without limit.

Promotion Expectations Particular to the Series

After five full years in rank, collegiate faculty are eligible for promotion. While a faculty member may request promotion prior to serving five years in rank, their dossier must provide clear evidence that they have met the criteria for promotion.
Positive evaluations of a faculty member’s accomplishments are required for promotion and may be provided by reviewers who are internal to the department, external to the department, or external to Virginia Tech, depending upon the nature of the faculty member’s assignment and the Promotion Guidelines of the department.

Given that promotion is not mandatory, collegiate faculty are obligated to inform the department head or chair of their intent to apply for promotion at least one year prior to application.

**General expectations for promotion:** Promotion to the rank of *Collegiate Associate Professor* requires evidence that a candidate’s teaching, including their pedagogy and curricular reform, has had impact within the department and has the potential for greater impact in the future; that a candidate’s scholarship has had impact locally, regionally, nationally, or internationally, depending on their assignment; and that they have made significant contributions to service.

Promotion to the rank of *Collegiate Professor* denotes distinguished professional and/or scholarly achievement and requires evidence that a candidate’s potential as a teacher, including their pedagogy and curricular reform, has been reached; that their scholarship has had impact regionally, nationally, or internationally, depending on their assignment; and that they have continued to make significant contributions to service.

A collegiate professor in a regular position who receives notice of non-reappointment may request a review of the decision by the college dean. If the dean sustains the non-reappointment decision, the faculty member may request, through the dean, a further and independent review of the decision by the properly constituted college committee on promotion and tenure in accordance with appropriate procedures. If the committee concurs with the dean’s decision, the decision is final. The dean notifies the faculty member in writing of the reasons for the committee’s decision and no further appeal is provided. If the committee's recommendation varies from the dean's, the case is automatically sent to the provost for review. The provost's decision is final.

**5.1.6 Instructor Series**

The responsibilities of a person appointed to one of the instructor ranks in an academic department are focused on undergraduate education, with minimal or no expectation for development of an independent program of research or scholarship. A master’s degree is the usual minimum educational credential for an appointment to the instructor ranks, and generally a minimum of 18 graduate credits teaching in the discipline is required to meet accreditation standards. Further information regarding appropriate credentials for the teaching faculty is found in chapter two, “Faculty Credentialing Guidelines,” and on the provost’s website. Instructors with distinctive assignments and work schedules will have these responsibilities conveyed in the terms of faculty offer letter at the time of appointment.

While initial appointment is typically at the entry rank, prior experience may be considered for a recommendation of appointment at a higher rank with the approval of the appropriate departmental committee and head or chair. Up to three years of similar instructional service at another accredited American four-year college or university may be counted toward the designated period required prior to review for promotion in rank.

Faculty members within the instructor ranks may not chair a graduate committee.

*Instructor:* The instructor rank is the initial rank for appointment of a full- or part-time faculty member. Primary responsibilities are usually to the instructional program, but assignments vary depending on the faculty member’s expertise and experience and departmental needs. Typically, they include teaching undergraduate courses, advising students, developing or revising courses and
curricula, and fulfilling other instructional, administrative, or service responsibilities. Appointment at this rank consists of a series of one- or two-year renewable appointments with a minimum of five years of completed service before consideration for promotion.

**Advanced Instructor.** Consideration for promotion to the rank of advanced instructor may be requested by the instructor or recommended by the department based on excellence in instructional responsibilities and significant evidence of related professional growth and development. Mentoring colleagues or graduate teaching assistants, student advising, course or curriculum development, or exemplary service or outreach are examples of ways in which instructors can make valuable contributions to the instructional programs in a department. Advanced instructors are expected to demonstrate mastery in teaching with significant impact on student learning and the department’s undergraduate programs. Scholarship and publication are not typically an assigned responsibility of instructor positions, but such accomplishments may be considered as part of the evaluation for promotion. Promotion to the advanced instructor rank is generally accompanied by a renewable three-year contract.

A minimum of five years of completed service at the advanced instructor rank is required before consideration for promotion to senior instructor.

**Senior Instructor.** Senior instructor is the capstone rank in the instructor series and promotion to this rank denotes exemplary instruction, demonstrated continued professional development, and significant contributions to undergraduate education. In addition to teaching courses, senior instructors may have considerable responsibility in mentoring colleagues or graduate teaching assistants, overseeing course development or special instructional initiatives, student advising, or other responsibilities reflecting their role as instructional leaders. Promotion to the rank of senior instructor is generally accompanied by a renewable five-year contract.

### 5.2.2 Reappointment

Non-tenure-track faculty members on restricted contracts whose appointments will be continued are issued a reappointment contract specifying the new ending date for their appointment. Reappointments typically occur on the anniversary of the hire date or are realigned to coincide with the academic year or other relevant appointment cycle. The practice of issuing repeated one-year restricted contracts for an individual faculty member over many years is explicitly discouraged, as it can be exploitative over an extended time.

Therefore, if a faculty member is to be reappointed into a restricted position when the faculty member has spent the preceding five years on restricted contracts, approval must be requested from the provost's office. The request should be supported by documentation demonstrating why the position cannot readily be converted to a regular appointment.

Reappointments for faculty members on regular contracts are usually effective July 1 (for calendar year appointments) or August 10 (for academic year appointments). Notice of non-reappointment is in accordance with periods identified in chapter two, “Retirement, Resignation, and Non-Reappointment.”

### 5.2.4 Promotion Guidelines for Non-Tenure-Track Faculty

Non-tenure-track faculty are eligible for promotion in accordance with guidelines and procedures maintained here and in each department’s Promotion Guidelines. (See chapter three, “Promotion and Tenure,” for information regarding the content of, and approval process for, departmental guidelines.)

Promotion in rank for non-tenure-track faculty is not a requirement of continued employment or...
an entitlement for years of service without evidence of merit, continued professional development, and contributions in the assigned roles. Positive evaluations of a faculty member’s accomplishments are required for promotion and may be provided by reviewers who are internal to the department, external to the department, or external to Virginia Tech, depending upon the faculty member’s rank, the nature of their assignment, and the Promotion Guidelines of the department.

Faculty members must be in a regular or restricted appointment to be considered for promotion. (See chapter five, “Reappointment,” for information regarding promotion for faculty members on restricted appointment). An approved promotion in rank is recognized by a change in title, increasing length of appointment contract, and a base salary adjustment as identified in the annual faculty compensation plan approved by the Board of Visitors.

**Progress reviews (for Clinical and Collegiate Faculty only):** Reviews are substantive and thorough. At minimum, departmental committees must review the faculty member's relevant annual activity reports, peer evaluations of teaching, and authored materials. It is strongly suggested that faculty use the series-appropriate promotion dossier format (available on the provost's website) to organize and present information for review. The reviews should analyze the faculty member's progress toward promotion and offer guidance regarding future activities and plans. All reviews must be in writing, with the faculty member acknowledging receipt by signing and returning a copy for their departmental file. Whenever possible, reviews should be performed by promotion and tenure committees or other equivalent standing committees.

Since work assignments of faculty can change over time, the committee will also determine if assignments conform to the expectations for the appropriate series. Committees are expected to recommend adjustments in work assignments when the nature and/or amount of work faculty have been assigned hinders their opportunity for promotion. These recommendations will be included in the written evaluation and must be considered by department heads and chairs during annual evaluations and when renewing contracts.

Departments must schedule at least one review of every clinical or collegiate faculty member during the term of each multi-year contract. However, after two reviews, faculty who do not intend to seek promotion or who have reached the capstone level of their series can decline the review. Beyond the normal schedule of reviews, faculty have the right to request a review in order to determine if their assignment still conforms to the expectations of their series.

**Promotion process:** The responsibilities of non-tenure-track faculty are tailored to the needs of their departments, and candidates for promotion are not expected to have equal levels of commitment or equal responsibilities in teaching, scholarship, and service. Therefore, evaluators must take unique features of every faculty member's department, discipline, and work assignment into account. Thus, as part of their Promotion Guidelines, each department is required to have an “Expectations and Indicators for Promotion” section that accounts for disciplinary and programmatic differences unique to and within the department and specifies what is required of their non-tenure-track faculty for promotion. These distinctions are best clarified at the department level and must be adhered to by evaluators at every stage of the promotion process. Expectations and indicators will be selected with the participation of and approved by faculty in the department through department- and college-level governance. Departments should carefully assess and state the overall standards of professional performance and contribution they consider minimally acceptable for the conferral of promotion. In colleges that adopt a college-wide set of Promotion Guidelines, the “Expectations and Indicators for Promotion” section will account for differences within and across departments, schools, and ranks.

Promotion candidates will be evaluated according to the expectations and indicators in effect at the time of their application for promotion.
Consideration for promotion in rank requires preparation of a dossier. Dossier templates for Instructors, Clinical Faculty, Collegiate Faculty, and Professors of Practice are available on the provost's website. A cover page is also required and available from the same website. The department head or chair, or the department committee, are responsible for ensuring that the dossier conforms to the appropriate format. Among other elements, the dossier includes the candidate’s statement; documentation of performance in the areas of teaching, scholarship, service, and other activities relevant to the candidate’s assignment; and a list of work under review or in progress. The dossier is completed by the addition of letters of evaluation (internal or external) and recommendation statements as the dossier is reviewed at the department and college levels. Colleges and departments may request supplemental materials.

Progress reviews for clinical and collegiate faculty and promotion evaluation of all non-tenure-track faculty are carried out by standing committees on which faculty form the majority, such as promotion and tenure committees or executive/personnel committees. Given the wide variation in representation of non-tenure-track appointments, some latitude is provided in the nature and make up of department and college committees. For example, in departments with significant numbers of instructors, the committee charged with reviews of instructor promotions would consist of majority representation of advanced and senior instructors. In departments with very few such appointments, the existing departmental promotion and tenure committee may review the dossier(s) and make recommendations. Similarly, at the college level either a special committee may be formed to review promotions of non-tenure-track faculty with majority representation of those in the advanced level of such ranks, or the existing promotion and tenure committees may be assigned such review and recommendation responsibilities. While the procedures vary due to practical issues and varying numbers, they should be included in departmental Promotion Guidelines and adhered to for consistency and fair treatment of all candidates. A faculty member may not serve on any committee that is evaluating a spouse, family member, or other individual with whom the faculty member has a close personal relationship. (See chapter two, “Conflicts of Interest.”)

Faculty being considered for promotion have their dossiers reviewed at as many as three levels: by an appropriately charged department committee and the department head or chair; by an appropriately charged college committee and the dean; and by the provost.

The department head or chair and dean make separate recommendations to the subsequent review levels. A positive recommendation from either or both the departmental committee and the department head or chair advances the dossier for promotion to the college committee level. Similarly, at the college level, a positive recommendation from either or both the college committee and the dean results in advancement of the recommendation to consideration by the provost.

The provost reviews the recommendations from departments and colleges and makes recommendations to the president; the president makes recommendations to The Board of Visitors, and the board makes the final decision.

Given that promotion decisions do not carry the same “up or out” consequences associated with tenure, a negative recommendation on a promotion request need not lead to the termination of employment. Indeed, a faculty member may remain at the initial rank as long as their performance warrants continued employment and serves departmental needs.

5.2.4.1 Candidate Notification

As a promotion case proceeds, the candidate must be notified in writing of the recommendations made by each committee and administrator. Any negative recommendations, whether by a committee or administrator, must include all substantive reasons for that recommendation,
including references to the relevant “Expectations and Indicators for Promotion” section of the Promotion Guidelines, as well as options for appeal. While notification letters may include excerpts from committee or administrator letters, they cannot include the results of any votes, the names of evaluators, or statements from their evaluations.

The department head or chair notifies the candidate of the department committee’s and the head’s or chair’s recommendations to the college. The dean notifies the candidate of the college committee’s and the dean’s recommendations to the provost. The provost notifies the candidate of the provost’s recommendations to the president. In cases with a final positive recommendation by the president, the provost notifies the candidate in writing that their case has been recommended by the president to the Board of Visitors for approval. In cases with a negative final recommendation by the president, the provost notifies the appropriate dean, who informs the candidate in writing of the reasons for the decision.

All notifications will take place within 10 university business days of the completion of the committee’s and administrator’s deliberations.

5.2.5 Appeals of Decisions on Promotion

Following a negative recommendation by both the department committee and the head or chair, the decision may be appealed to the college committee based on the following claims only: department criteria in the relevant “Expectations and Indicators for Promotion” section were not appropriately applied; material from the dossier was unavailable to or disregarded by reviewers through no fault of the candidate; or information in the dossier was not considered in a fair and objective manner. The appeal must be filed within 10 university business days of official notification of the promotion decision. If either the college committee or the dean grants the appeal of a negative department decision, the case resumes normal consideration, beginning with the college committee and dean. A negative recommendation at the college level or by the provost cannot be appealed.

Additionally, faculty have the option to grieve procedural violations of the promotion process—including violations of the appeal process presented in this section—after a negative decision on an appeal or instead of filing an appeal in the first place. Since the grievance procedures allow the grievant to state both the grievance they believe they have experienced and the relief they seek, it has a wider range of possible outcomes than the appeal process. However, because it is a slower process that would likely not be completed until the promotion cases in a given year have been decided, and because faculty cannot grieve “items falling within the jurisdiction of other university policies and procedures,” a grievance should be thought of as a means for faculty to seek an outcome they cannot seek through the appeal process. The grievance process is described in chapter five, “Faculty Grievance Policy and Procedures.”

Appendix 2: Original Subsections 5.0, 5.15, 5.2.4, 5.2.4.1, and 5.2.5

5.0 Employment Policies and Procedures for Non-Tenure-Track Instructional Faculty

Non-tenure-track faculty members fill critical roles in the learning, discovery, and engagement missions at Virginia Tech. They complement the efforts and qualifications of tenure-track faculty, provide access to specialized faculty resources, and allow flexibility to address programmatic needs. As valuable contributors to departmental and institutional missions, they are entitled to fair treatment and compensation, access to professional development opportunities, recognition for their accomplishments, and participation in the life of the university community. The following policies address specific aspects of non-tenure-track instructional faculty appointments. In a few cases, faculty members with regular academic rank (assistant, associate, or professor) hold non-tenure-
track appointments because of unusual job responsibilities and historical lack of appropriate alternative ranks. Policies in this section also apply to those individuals.

Ordinarily a graduate or professional degree is required for appointment to one of these ranks. Appointments are made using established university search procedures. (See chapter two, “Faculty Search Procedures,” and the Human Resources website.)

Academic departments retain the authority and responsibility to decide whether to employ non-tenure-track faculty members to deliver aspects of their instructional program. An appropriate departmental committee approves the departmental policies and practices related to the use of non-tenure-track rank.

### 5.1.5 Collegiate Professor Ranks

Academic departments retain the authority and responsibility to make decisions about whether to employ collegiate professors. Departmental policies and practices related to the use of non-tenure-track ranks must be approved by an appropriate standing committee in the department, such as a promotion and tenure or executive/personnel committee, the department head or chair, and dean.

Collegiate professors must have a major commitment to the instructional missions of the department. The involvement of collegiate professors can include classroom and online teaching, curricular updates, course transformations, and the adoption/integration of innovative and inclusive pedagogy. Working in collaboration with the department's other faculty, collegiate faculty may take a lead role in enhancing the curricula and promoting teaching excellence.

The collegiate professor series provides for short- or long-term, full- or part-time, non-tenure-track faculty appointments for individuals who bring specialized expertise to the instructional programs of the university, thereby complementing the qualifications and contributions of tenure-track faculty. (These rank titles may be used for wage [P14] appointments in lieu of adjunct assistant, associate, or professor, if appropriate for the assignment and credentials of the individual.) Individuals appointed to these ranks are expected to be successful and effective professionals in a given field. They must be effective teachers of the discipline and they are expected to be able to understand and evaluate the research that applies to their field and to teach it to students. Collegiate professor faculty members may conduct research on the scholarship of teaching and learning related to their field and/or on disciplinary topics in their field and present their findings in professional venues, but there are no expectations for an extensive research program as is typical of tenure-track faculty appointments.

Collegiate professor faculty members are expected to remain active in their disciplines/professions in ways that contribute to their assignment—teaching, consulting, or outreach, serving in technical and professional societies and associations, and similar activities. Where appropriate to their assignment, they may interact with graduate or professional students and interns, serve on graduate committees, and chair graduate advisory committees with the approval of the academic unit and the graduate school. They may also be expected to serve on departmental, college, or university committees as contributing members of their departments and the broader university community.

Collegiate professors are appointed to 3-, 5-, or 7-year contracts. Contractual details outlined in the Terms of Faculty Offer (TOFO) may be complemented with a statement of work negotiated between the faculty member and the department head.

Individuals appointed to a collegiate professor rank must have a terminal or professional degree in the discipline (or a related discipline) and professional certification(s), if relevant, and must be certified by the department as appropriately credentialed for the faculty member's particular instructional assignment in accordance with guidelines for regional accreditation and university
policy and procedures. Further information regarding appropriate credentials for the teaching faculty is found in chapter two, "Faculty Credentialing Guidelines," and on the provost's website.

A record of significant scholarly and/or professional achievement is expected for appointment at the associate or professor level; initial appointments at such ranks require approval of the appropriate departmental committee and head or chair. Appointment to one of these ranks is for a specified number of years (see below) and is renewable without limit. Performance and promotion evaluations of collegiate professors is performed by department and college standing committees where faculty form the majority, such as a promotion and tenure committee or executive/personnel committee.

A collegiate professor in a regular position who receives notice of non-reappointment may request a review of the decision by the college dean. If the dean sustains the non-reappointment decision, the faculty member may request, through the dean, a further and independent review of the decision by the properly constituted college committee on promotion and tenure in accordance with appropriate procedures.

Promotion within these ranks may be pursued through procedures outlined in this section. Tenure will not be awarded at any of these ranks and service at these ranks is excluded from the pre-tenure probationary period if the faculty member is subsequently appointed to a tenure-track position.

Collegiate Assistant Professor: Persons appointed at this rank have a terminal graduate or professional degree in the discipline (or a related discipline) and professional certification(s), if relevant. Experience and demonstrated competence in teaching are expected. Appointment to this rank is for three years and is renewable without limit.

Collegiate Associate Professor: Persons appointed at the collegiate associate professor rank have a terminal graduate or professional degree in the discipline (or a related discipline) and professional certification(s), if relevant. Credentials for appointment or promotion to this rank must document a record of significant instructional experience and accomplishments relevant to the field and type of assignment. Appointment to this rank is for five years and is renewable without limit.

Collegiate Professor: Collegiate professor is the capstone rank in the series. Appointment to this rank denotes distinguished professional achievement, and regional, national, or international prominence in the field. Credentials for appointment or promotion to this rank must document a record of significant instructional experience and scholarly accomplishments relevant to the field and type of assignment. External evaluation of such accomplishments and leadership in the field is expected at the time of appointment or promotion. Appointment to this rank is for seven years and is renewable without limit.

5.2.4 Promotion Guidelines for Instructors, Professors of Practice, and Clinical Faculty Ranks

Non-tenure-track faculty members are eligible for promotion in rank in accordance with guidelines established by academic departments and approved by an appropriate college-level committee and the dean. Such guidelines should outline the process and criteria for promotion in rank; they should be widely available along with other departmental and college documents related to promotion and tenure. Faculty members may be in a regular or a restricted appointment to be considered for promotion.

Promotion in rank for any non-tenure-track position is not a requirement of continued employment, or an entitlement for years of service without evidence of exceptional merit, continued professional development, and contribution in the assigned role. An approved promotion in rank is recognized by
a change in title, increasing length of appointment contract, and a base salary adjustment as identified in the annual faculty compensation plan approved by the Board of Visitors.

Consideration for promotion in rank includes preparation of a dossier using a common university format, which may be based on relevant elements of the promotion and tenure dossier format for tenure-track faculty members. Typically such a dossier includes a statement of professional direction and accomplishment, a complete curriculum vitae, and documentation of contributions associated with the instructor's appointment. These contributions can be to instructional programs or administrative and/or service responsibilities. Colleges and departments may request supplemental materials. The appropriate college committee and dean approve guidelines for dossier development and departmental policies and procedures for the promotion process. External review of credentials are required for some – but not all – promotions in non-tenure-track ranks. Requirements are outlined in the promotion and tenure guidelines listed on Promotion and Tenure page of the provost's website.

The promotion dossier is reviewed at three levels: (1) by an appropriately charged departmental committee and the department head or chair, (2) by an appropriately charged college-level committee and the dean, and (3) by the provost. The department head or chair and dean make separate recommendations to the subsequent review levels. The provost reviews college and dean recommendations and makes recommendations to the president. The Board of Visitors grants final approval.

Given the wide variation in representation of non-tenure-track instructional appointments some latitude is provided in the nature and make up of department and college committees. For example, departments with significant numbers of instructors, the committee charged with reviews would consist of majority representation of advanced and senior instructors. (or associate and clinical professors). In departments with very few such appointments, the existing departmental promotion and tenure committee may review the dossier(s) and make recommendations. Similarly, at the college level either a special committee may be formed to review promotions of non-tenure-track instructional faculty with majority representation of those in the advanced level of such ranks, or the existing promotion and tenure committees may be assigned such review and recommendation responsibilities. While the procedures vary to recognize practical issues and varying numbers, the guidelines for review should be in writing and adhered to for consistency and fair treatment of all candidates. A faculty member may not serve on any committee that is evaluating a spouse, family member, or other individual with whom the faculty member has a close personal relationship. (See chapter two, "Potential Conflicts Involving Spouses and Immediate Family Members."

Given that promotion decisions do not carry the same “up or out” decision associated with tenure decisions, a negative recommendation on a promotion request need not translate into termination of employment. Indeed, a faculty member may remain at the initial rank as long as their performance warrants continued employment and serves departmental needs. If the promotion request is not supported on the first submission, it may not be appealed until at least a second review has taken place in a subsequent or later year.

Following the same pattern as review of tenure-track faculty members, a positive recommendation from either or both the departmental committee and the department head or chair automatically advances the dossier for promotion to the college committee level. Similarly, at the college level, a positive recommendation from either or both the college committee and the dean results in automatic advancement of the recommendation to consideration by the provost. The decision of the provost is final and cannot be appealed.
Faculty members should be provided written feedback in the case of a negative recommendation at either the department or college level so that they might improve their performance or dossiers for a later submission.

5.2.4.1 Promotion Guidelines for Collegiate Professor Ranks

Non-tenure-track faculty members are eligible for promotion in rank in accordance with guidelines established by academic departments and approved by an appropriate college-level committee and the dean. Such guidelines should outline the process and criteria for promotion in rank; they should be widely available along with other departmental and college documents related to promotion and tenure. Faculty members must be in a regular or restricted appointment to be considered for promotion. (See chapter five, "Reappointment," for information regarding promotion for faculty members on restricted appointment).

Promotion in rank for any non-tenure-track position is not a requirement of continued employment, or an entitlement for years of service without evidence of exceptional merit, continued professional development, and contribution in the assigned role. An approved promotion in rank is recognized by a change in title, increasing length of appointment contract, and a base salary adjustment as identified in the annual faculty compensation plan approved by the Board of Visitors.

Consideration for promotion in rank includes preparation of a dossier using a common university format for collegiate professors, which may be based on relevant elements of the promotion and tenure dossier format for tenure-track faculty members. Typically such a dossier includes a statement of professional direction and accomplishment, a complete curriculum vitae, and documentation of contributions associated with the collegiate faculty's appointment. These contributions can be to instructional programs or administrative and/or service responsibilities. Colleges and departments may request supplemental materials. The appropriate college committee and dean approve guidelines for dossier development and departmental policies and procedures for the promotion process. External review of credentials is required for promotion to collegiate associate professor and professor.

The promotion dossier is reviewed at three levels: (1) by an appropriately charged departmental committee and the department head or chair, (2) by an appropriately charged college-level committee and the dean, (3) by the university promotion and tenure committee. The department head or chair and dean make separate recommendations to the subsequent review levels. The provost reviews the recommendations from the three levels and makes recommendations to the president. The Board of Visitors grants final approval.

Given the wide variation in representation of non-tenure-track collegiate faculty appointments in the various academic colleges, some latitude is provided in the nature and make up of such committees. For most departments, the existing departmental promotion and tenure committee may review the dossier(s) and make recommendations. Similarly, at the college level, the existing promotion and tenure committees may be assigned such review and recommendation responsibilities. While the procedures vary to recognize practical issues and varying numbers, the guidelines for review should be in writing and adhered to for consistency and fair treatment of all candidates. A faculty member may not serve on any committee that is evaluating a spouse, family member, or other individual with whom the faculty member has a close personal relationship. (See chapter two, “Potential Conflicts Involving Spouses and Immediate Family Members.”)

Given that promotion decisions do not carry the same “up or out” decision associated with tenure, a negative recommendation on a promotion request need not translate into termination of employment. Indeed, a faculty member may remain at the initial rank as long as their performance
warrants continued employment and serves departmental needs. If the promotion request is not supported on the first submission, it may not be appealed until at least a second review has taken place in a subsequent or later year.

Following the same pattern as review of tenure-track faculty members, a positive recommendation from either or both the departmental committee and the department head or chair automatically advances the dossier for promotion to the college committee level. Similarly, at the college level, a positive recommendation from either or both the college committee and the dean results in automatic advancement of the recommendation to consideration the university promotion and tenure committee.

The faculty member should be provided written feedback in the case of a negative recommendation at either the department, college, or university level so that they might improve their performance or dossiers for a later submission.

5.2.5 Appeals of Decisions on Promotion

Following a second negative review by both the departmental committee and department head or chair, the decision may be appealed to the college committee, but only on grounds that relevant information was not considered or that the decision was influenced by improper consideration. The appeal must be filed within 14 days of official notification. A negative recommendation from both the college and the dean ends the process. There is no appeal available when both the college committee and dean vote “no.”

Significant procedural violations may be grieved under the faculty grievance process described in chapter five, "Faculty Grievance Policy and Procedures.”
RESOLUTION TO CLARIFY PROBATIONARY REAPPOINTMENT LANGUAGE IN THE FACULTY HANDBOOK

WHEREAS, two different descriptions of the reappointment process appear in subsections 2.19.3.1 and 3.4.5.1 of the Faculty Handbook; and

WHEREAS, subsection 2.19.3.1 of the Faculty Handbook should include the schedule of notice of non-reappointment and not the process for determining reappointment; and

WHEREAS, there is currently no process in chapter 3 of the Faculty Handbook for resolving reappointment recommendations that differ between department heads and chairs and department personnel committees;

NOW, THEREFORE, BE IT RESOLVED that subsections 2.19.3.1 and 3.4.5.1 of the faculty Handbook be revised as indicated in the attached text below.

RECOMMENDATION:
That The Board of Visitors Approve the Resolution to Clarify Probationary Reappointment Language in the Faculty Handbook.

March 22, 2021
2.19.3.1 Non-Reappointment for Faculty on Tenure-Track or Continued Appointment-Track

Faculty members on probationary term appointments should make no presumption of reappointment, including reappointment with tenure. Non-reappointment may be determined by the department head or chair in consultation with the dean and with the advice of a departmental personnel committee or faculty development committee.

Faculty members on probationary term appointments that will not be renewed are given notice of non-reappointment in writing within the following time limits:

First year of employment (one-year term appointment): February 9 of academic year or three months before end of employment year;

Second year of employment: November 9 of the academic year or six months before end of employment year;

Subsequent years: 12 months before end of employment year (May 9 for academic year appointments).

3.4.5.1 Probationary Reappointment

Faculty members on probationary term appointments should make no presumption of reappointment. The department head or chair, with the advice of the departmental personnel committee or the faculty development committee, evaluate faculty for non-reappointment. The specific reasons for the decision are provided to the faculty member in writing, if requested. (See chapter three, 3.4.2 Pre-Tenure Probationary Period and Progress Reviews.)

If the decision is based primarily on evaluation of the faculty member’s performance, including perceived lack of potential for further professional development, then the faculty member may request a review of the decision by the dean of the college. If the dean sustains the departmental decision, the faculty member may request, through the dean, the further and independent review of the decision by the properly constituted college committee on promotion and tenure.

The committee makes a recommendation on each candidate to the head or chair. If the head or chair does not concur with the committee’s recommendation, or if both the head or chair and the committee recommend non-reappointment, the specific reasons for the negative recommendation(s) are provided to the faculty member in writing by the department head or chair, and there is an automatic review of the candidate’s dossier by the dean. If the dean reaches a decision of non-reappointment, the faculty member is notified by the dean in writing of the decision and the specific reasons for it. If the decision is based primarily on evaluation of the faculty member’s performance, including perceived lack of potential for further professional development, then the faculty member may request a review of the decision by the dean of the college. If the dean sustains the departmental decision, the faculty member may request, through the dean, the further and independent review of the decision by the properly constituted college committee on promotion and tenure.

The faculty member may then request, through the dean, that the college committee on promotion and tenure independently review the decision. The faculty member presents the appeal in writing as specified in chapter three, “ Appeals of Decisions on Reappointment, Tenure, or Promotion.” The faculty member may elect to present oral arguments to the committee. If the committee concurs with the dean’s decision, the decision is final. The dean notifies the faculty member in writing of the
reasons for the committee’s decision and no further appeal is provided. If the committee’s recommendation varies from the dean’s, the case is automatically sent to the provost for review. The provost's decision is final. The college committee makes recommendation to the dean, who informs the faculty member of the committee's recommendation and the dean's subsequent decision. The dean's decision closes the appeal process, unless it is at variance with the college committee's recommendation, in which case the faculty member may appeal to the provost for a final decision.

Notice of non-reappointment is furnished according to the schedule in chapter two, “Retirement, Resignation, and Non-Reappointment.”
RESOLUTION TO AMEND VIRGINIA TECH’S VOLUNTARY TRANSITIONAL RETIREMENT PROGRAM FOR TENURED FACULTY
(UNIVERSITY POLICY NO. 4410)

WHEREAS, the Code of Virginia § 23-9.2:3.1 allows institutions of higher education in the commonwealth to execute retirement incentive plans for tenured faculty members who meet eligibility criteria, and

WHEREAS, the university’s colleges and departments benefit from the experience of senior faculty members, and

WHEREAS, a voluntary transitional retirement program provides flexibility to colleges, departments, and retiring faculty members as they manage the transition from full time employment to retirement, and

WHEREAS, the university’s faculty transitional retirement program, under University Policy No. 4410 Voluntary Transitional Retirement Program for Tenured Faculty was revised in April of 2017 to allow departments and retiring faculty members the opportunity to design a succession plan not to exceed three years that takes into account optimum planning for and management of the transition of teaching, student supervision, research, service, and other responsibilities, and

WHEREAS, the current voluntary transitional retirement program offers a one-year transitional appointment with no reduction in FTE or salary that is designed for faculty who are over 60 but under the age of 65 and want to retire but receive a continuation of employer medical premiums to be paid by the university until age 65; and

WHEREAS, the current voluntary transitional retirement program also offers two and three-year transitional appointments that include an FTE reduction to .50, and a corresponding reduction in salary; and

WHEREAS, the voluntary transitional program would be further enhanced through the addition of a one-year option that includes an FTE reduction to .50, and a corresponding reduction in salary; and

WHEREAS, clarification of language around the process for receive a continuation of employer medical premiums to be paid by the university until age 65 is needed.

NOW, THEREFORE BE IT RESOLVED, that University Policy No. 4410 be amended to include the revisions indicated in the attached policy and that the revisions be forwarded to the State Council of Higher Education for Virginia (SCHEV) for appropriate review and subsequent submission to the Office of the Governor; and

BE IT FURTHER RESOLVED, that the revisions will be communicated appropriately in the university’s electronic and print materials.

RECOMMENDATION:
That University Policy No. 4410 be amended to include the revisions outlined above.

March 22, 2021
1.0 Purpose

This policy outlines a program to assist the university's tenured and continued-appointment faculty in their transition from full-time active service to retirement and, in some cases, to facilitate their subsequent part-time re-employment to address staffing needs or to support research efforts.

For many prospective retirees, the loss of employer-paid medical benefits can be a significant factor in their decision to postpone retirement. In addition, part-time temporary re-employment is considered a desirable option by many faculty members who would like to utilize their professorial talents but with a reduced workload. Faculty members may assume teaching roles, mentor graduate students, conduct sponsored research, or take on other part-time responsibilities where their expertise will make a significant contribution to the employing unit. By utilizing a transitional retirement program, the university hopes to make it possible for long-term faculty to remain actively involved in the life of the university while reducing their professorial responsibilities.

1.1 Background

The Code of Virginia §23.1-1302 allows institutions of higher education in the Commonwealth to execute retirement incentive plans for tenured faculty who meet certain eligibility criteria. Any such program would be funded by institutional resources and must meet the applicable requirements as specified by the Code of Virginia and the Appropriations Act.

2.0 Policy

The Voluntary Transitional Retirement Program (VTRP) is an enhanced retirement program for eligible tenured faculty. Participation in the plan is voluntary for both the university and the faculty member. The elements of the program are discussed in greater detail below.

2.1 Program Objectives

To facilitate the transition of faculty from full-time active service to retirement by continuing to pay the employer portion of medical premiums and, if mutually agreeable, to consider those faculty for temporary work assignments in areas where their expertise may be needed.

1. Continuation of the employer portion of medical premiums paid by the university until age 65 for those who retire earlier.

2. To transition full time tenured faculty into full retirement over an established timeframe, allowing faculty to reduce their full-time commitment but not abruptly sever their ties with the university.
3. To allow succession planning for filling the vacancy that will occur once the faculty member is fully retired.

2.2 Eligibility for Participation in the Program

The VTRP can be established over a timeframe of one (VTRP-H, VTRP-1), two (VTRP-2) or three (VTRP-3) years. Eligibility for each of these timeframe is described in further detail below.

2.2.1 Eligibility for VTRP-H

Participants in the VTRP-H agree to retire by the end of one year from the commencement of the agreement.

Participants in the program must:

1. be at least 60 years of age;
2. be a faculty member or administrator with tenure or a contractual right to continued employment as described in the Faculty Handbook (http://www.provost.vt.edu/faculty_affairs/faculty_handbook.html);
3. have at least 10 years of full-time service at Virginia Tech (full-time service may include periods of leave with full or partial pay, but excludes periods of leave without pay);
4. agree to withdraw from active membership in the Virginia Retirement System (VRS) (http://www.varetire.org/), or Optional Retirement Plans. The university will cease making employer or employee contributions to VRS or optional retirement plans as of the date of retirement;
5. comply with any additional criteria established by the Board of Visitors;
6. voluntarily participate in the program.

2.2.2 Eligibility for VTRP-1

Participants in the VTRP-1 agree to retire by the end of one year from the commencement of the agreement, or by the end of the current academic year in which the agreement is executed. Participants in the program must:

1. be at least 60 years of age;
2. be a faculty member or administrator with tenure or a contractual right to continued employment as described in the Faculty Handbook (http://www.provost.vt.edu/faculty_affairs/faculty_handbook.html);
3. have at least 10 years of full-time service at Virginia Tech (full-time service may include periods of leave with full or partial pay, but excludes periods of leave without pay);
4. agree to withdraw from active membership in the Virginia Retirement System (VRS) (http://www.varetire.org/), or Optional Retirement Plans. The university will cease making employer or employee contributions to VRS or optional retirement plans as of the date of retirement;
5. comply with any additional criteria established by the Board of Visitors;
6. voluntarily participate in the program.

2.2.3 Eligibility for VTRP-2 and VTRP-3

Participants in the VTRP-2 and VTRP-3 agree to retire by the end of two or three years (depending on the program) from the commencement of the agreement. Participants in the program must:

1. be at least 60 years of age;
2. be a faculty member or administrator with tenure or a contractual right to continued employment as
described in the Faculty Handbook (http://www.provost.vt.edu/faculty_affairs/faculty_handbook.html);

3. have at least 20 years of full-time service at Virginia Tech (full-time service may include periods of leave with full or partial pay, but excludes periods of leave without pay);

4. agree to withdraw from active membership in the Virginia Retirement System (VRS) (http://www.varetire.org/), or Optional Retirement Plans. The university will cease making employer or employee contributions to VRS or optional retirement plans as of the date of retirement;

5. comply with any additional criteria established by the Board of Visitors;

6. voluntarily participate in the program.
2.3 Major Program Elements

2.3.1 VTRP-H

The program participant agrees to retire by the end of the academic year following execution of the agreement. During the agreement, the participant would receive no FTE reduction, and would be expected to teach a standard teaching load as expected by the academic unit.

2.3.2 VTRP-1

The program participant agrees to retire at the end of the current academic year following execution of in which the agreement is executed. During the agreement, the participant would receive an FTE reduction to .50, including a corresponding reduction in salary. Corresponding reductions to teaching, research, and service responsibilities would be made in consultation with the department head and dean and detailed in the participant’s agreement. Modifications to benefits under VTRP-1 are described further in section 2.3.4 below. During the agreement, the participant would receive no FTE reduction, and would be expected to teach a standard teaching load as expected by the academic unit.

2.3.3 Continuation of Medical Benefits to Age 65

Eligible faculty members who participate in the VTRP-1 program will be reimbursed for the equivalent of the employer’s portion of the health insurance premium until age 65 whether they opt for complete retirement or are rehired into a non-covered position. The reimbursement amount will be adjusted by Human Resources in accordance with changes in the state’s retiree health insurance rates. The request for participation in this program and for reimbursement of health care insurance premiums must be in writing. See Section 3: Procedures.

2.3.2 VTRP-2

The program participant agrees to retire from Virginia Tech within two years of the commencement of the VTRP agreement. During the agreement, the participant would receive an FTE reduction to .50, including a corresponding reduction in salary. Corresponding reductions to teaching, research, and service responsibilities would be made in consultation with the department head and dean and detailed in the participant’s agreement. Modifications to benefits under VTRP-2 and VTRP-3 are described further in section 2.3.4 below.

2.3.3 VTRP-3

The program participant agrees to retire from Virginia Tech within three years of the commencement of the VTRP agreement. During the agreement, the participant would receive an FTE reduction to .50, including a corresponding reduction in salary. Corresponding reductions to teaching, research, and service responsibilities would be made in consultation with the department head and dean and detailed in the participant’s agreement. Modifications to benefits under VTRP-2 and VTRP-3 are described further in section 2.3.4 below.

2.3.4 Benefits during VTRP-1, VTRP-2, and VTRP-3 Programs

Eligible faculty members who participate in the VTRP-2 or VTRP-3 program will receive the following continuation of benefits during their transitional appointment:

a. Health Insurance - The university will pay the employer portion of the health insurance benefits during the duration of the VTRP;
b. Retirement;
   • ORP – employer contribution will be based on the adjusted annual salary;
   • VRS – employee will continue to earn service credit;

c. Life Insurance - will be based on the adjusted annual salary;
d. Sick Leave – in accordance with plan rules;
   e. Long-Term Disability – benefits based on the adjusted annual salary.

2.4 Continuation of Medical Benefits to Age 65

2.3.4.1 Benefits after VTRP-2 and VTRP-3 Programs for participants under age 65
Eligible faculty members who participate in any VTRP option and are still under the age of 65 at the conclusion of their transition program will remain eligible to continue health insurance coverage under a Virginia Tech plan. Once the employee transitions to retirement, the university will pay the monthly premiums, and the employee (retiree) will be responsible for reimbursing VT for the equivalent of the employee’s portion of the health insurance premium until age 65, whether they opt for complete retirement or are rehired into a non-covered position. The employee portion of the premium will be billed by Human Resources, and will include any increases in accordance with changes in the state’s retiree health insurance rates. The request for participation in this program and for reimbursement of health care insurance premiums must be in writing. See Section 3: Procedures.

After the conclusion of the VTRP-2 or VTRP-3 programs, if the faculty member is still under the age of 65, they will be eligible for the VTRP-1 program benefit of being reimbursed for the equivalent of the employer’s portion of the health insurance premium until age 65. The reimbursement amount will be adjusted by Human Resources in accordance with changes in the state’s retiree health insurance rates. The request for participation in this program and for reimbursement of health care insurance premiums must be in writing. See Section 3: Procedures.

2.62.5 Part-time temporary re-employment after retirement

VTRP retirees are eligible to return to non-covered employment after a designated break in service, and may be reemployed in part-time positions where their expertise and experience are best suited. The following guidelines apply to the part-time, non-covered employment for VTRP retirees:

a. The faculty member must have one calendar month break in service prior to reemployment in a non-covered position;

b. the faculty member may not return to a position that provides retirement benefits.

c. the temporary work after retirement cannot be identical to the work performed prior to retirement. Typically this requirement can be satisfied by reemployment doing part, but not all, of the prior role – for example, only conducting research or only teaching a course.

d. Any agreement for reemployment must be in writing, but may not be developed until AFTER retirement. The agreement should specify the nature and duration of the assignment and the amount of compensation. The reemployment agreement should be reevaluated every six months, or on a similar periodic cycle based on the assignment.

e. Appropriate office space (perhaps shared) and reasonable access to clerical support and departmental operating resources may be furnished. Please see Policy 4405 on emeritus appointments for further information.

2.72.6 Authority

The Board of Visitors reserves the right to modify, amend, or repeal the program.
3.0 Procedures

Eligible tenured faculty interested in applying for participation in the program must submit an application to their department head and dean. The provost or a designee must approve the application. Applications are accepted on a rolling basis, but faculty are encouraged to discuss interest in participating with their department head as early as possible to allow ample time for planning coverage of teaching and service responsibilities.

To begin the program in the fall, applications must be received in the provost’s office by the end of February.

To begin in the program in the spring, applications must be received in the provost’s office by the end of August.

Faculty members have seven (7) days to revoke the agreement; participants must be given twenty-one (21) days to consider entering into this agreement; participants are advised to seek advice of an attorney. (Older Workers Protection Act, 1990)
4.0 Definitions

**Active Membership** -- as defined by the Virginia Retirement System, an active member works in a covered position with an employer that participates in the Virginia Retirement System (VRS) or is covered under an optional retirement plan (ORP) administered by VRS.

**Non-Covered Employment** -- as defined by the Virginia Retirement System, is a part-time position with a VRS-participating employer. Non-covered positions do not provide eligibility for benefits.

5.0 References

Policy 4405: Emeritus Faculty
http://www.policies.vt.edu/4405.pdf

6.0 Approval and Revisions

The Faculty Retirement Transition Program was endorsed in principle by the Employee Benefits Committee and the Commission on Faculty Affairs.

Approved August 13, 1990, by the Board of Visitors.
Approved September 17, 1990, by Senior Vice President and University Provost, E. Fred Carlisle.

- **Revision 1**
  Information about retirement counseling programs removed. Changed specific references to TIAA to "optional retirement plans" (ORP).
  Indefinite continuation of the program endorsed by the Commission on Faculty Affairs.
  Approved April 26, 1993, by the Board of Visitors.

- **Revision 2**
  Addition of link to VRS web page and minor clarifications.
  Approved January 22, 1999, by Executive Vice President, Minnis E. Ridenour.

- **Revision 3**
  Revisions to the requirements for faculty retiring from VRS to comply with Virginia Retirement System restrictions on post-retirement employment, and general updating.
  Approved February 11, 2004 by the University Provost and Vice President for Academic Affairs, Mark G. McNamee.

- **Revision 4**
  September 1, 2006 – Technical revision to change name from Personnel Services to Human Resources

- **Revision 5**

- Revision 6
  Modified to incorporate two additional forms of phased/transitional retirement, and to clarify language.
  Updated policy title from “Faculty Retirement Transition Program.”
  Approved April 3, 2017 by the Board of Visitors.
  Approved April 3, 2017 by President Timothy D. Sands.

- Revision 7
  Modified to clarify that the guidelines for part-time temporary re-employment after retirement applies to all VTRP retirees (section 2.4)
  Approved April 1, 2019 by the Board of Visitors.
  Signed April 6, 2019 by President Timothy D. Sands.
Laura Belmonte, Dean
Academic, Research, and Student Affairs Committee
Board of Visitors
March 22, 2021
MEET THE

COLLEGE OF LIBERAL ARTS AND HUMAN SCIENCES

Academy of Transdisciplinary Studies

3 Schools

325 Tenured and Tenure Track

11 Departments

18 Research Centers

883 Graduate Students

509 Faculty*

• 325 Tenured and Tenure Track
• 185 Other

107 Staff

* Refers to salaried faculty and does not include part-time and adjunct or graduate assistants
COLLEGE OF LIBERAL ARTS AND HUMAN SCIENCES

ENROLLMENT TRENDS

- Undergraduate Enrollment
- Total CLAHS Enrollment

Graduation Rate: 85%
National Rate: 62%*

Time to Degree
3.84 years

First Year Retention: 93%
National Retention: 78%**

*National Center for Education Statistics **College Transitions
## College of Liberal Arts and Human Sciences

### Diversity, Equity, and Inclusion

**Juneteenth Faculty Scholars**
**Teach-Ins on Social Justice**
**Assistant Dean for Diversity, Equity, and Inclusion**
**Director of Transdisciplinary Initiatives**
**Faculty Fellow for Diversity, Equity, and Inclusion**

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<tr>
<td>1697 Underserved and Underrepresented Undergraduate Students</td>
<td>37%</td>
</tr>
<tr>
<td>207 Underserved and Underrepresented Graduate Students</td>
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NEW INITIATIVES

Academy of Transdisciplinary Studies
School of Communication
Russian Language Flagship
Center of European Union, Transatlantic, and Trans-European Space Studies
- A Jean Monnet Center of Excellence
Kellogg Center for Philosophy, Politics, and Economics
Food Studies Program and VT Libraries collaboration on the Food Timeline
Center for Refugee, Migrant, and Displacement Studies
Tech4Humanity Lab
RESEARCH PRODUCTIVITY

☑ External Funding
☑ National Fellowships
☑ Books
☑ Poems
☑ Plays

☑ Musical Scores
☑ Films
☑ Performances
☑ Albums
☑ Journal Articles
☑ Conference Presentations
COVID-19 in Context: Deans’ Forum on the Pandemic
Child Development Center for Learning and Research - Infant Care Expansion
Caregiver Statement
Laura Belmonte, dean of the College of Liberal Arts and Human Sciences, serving as a liaison with the council of college deans will update the committee on behalf of the council.
Provost’s Update

ACADEMIC, RESEARCH, AND STUDENT AFFAIRS COMMITTEE

March 22, 2021

Cyril Clarke, executive vice president and provost, will provide an update.
ExperienceVT
Integrating academic and student life for holistic student development, well-being, and success.

Frank Shushok, vice president, Student Affairs
Thomas Miller, undergraduate student
Ellie Sturgis, director, Cook Counseling Center
C.L. Bohannon, associate professor, Landscape Architecture; faculty principal, Leadership and Social Change
Residential College

Virginia Tech Board of Visitors
Academic, Research, and Student Affairs Committee
March 22, 2021
The Economics of Human Development

- Hope
- Wellbeing
- Strengths
- Engagement
- Academic Success

ExperienceVT

STUDENT AFFAIRS
VIRGINIA TECH
Imagine who I’d like to become?

Who am I?

Academic program? Experiences? Mentors? Career goals?

Obstacles, barriers, and unexpected challenges (e.g. mental health, COVID-19, finances, food security, family life)
What experiences will help you make progress toward your goals? How can we support you? What are your goals? What are your goals? pathways agency progress toward goals day by day What barriers are in your way? What experiences will help you make progress toward your goals? What are your goals?
MY EXPERIENCEVT DASHBOARD

This is your ExperienceVT dashboard. Use it to focus on key success factors - your strengths, goals, reflections, and map.

By knowing who you are, why you’re here, and where you’re headed, you will ExperienceVT and thrive.

Welcome, TARAN CARDONE

Edit your profile

MY STRENGTHS:  IDEATION | INTELLECCTION | CONNECTEDNESS | MAXIMIZER | ACHIEVER

MY REFLECTIONS

Goal 1
Align my strengths with leading the Office for Learning Partnerships

Goal 2
Launch the ExperienceVT web app in Fall 2020!!

Goal 3
Equip colleagues and students to use the ExperienceVT web app in inspiring ways
What does ExperienceVT look like in the daily lives of students?

Thomas Miller, Senior studying Sociology, Undergraduate Fellow, Vice President for Student Affairs Office, and Chair, Student Life Council

Ellie Sturgis, director of the Cook Counseling Center

C.L. Bohannon, Faculty Principal, Leadership and Social Change Residential College, and associate professor of Landscape Architecture, director of the Community Engagement Lab
Cook Counseling Center is expanding our services and options to allow for a flexible, multi-faceted approach to meet the emerging and varying needs of students. Students begin by scheduling a Cook Connect Session. At this 15-20 minute meeting, the Connect Clinician will review student concerns, discuss available resources, and collaboratively develop a Connect Plan that will provide the support they need. Connect clinicians will also discuss how students can follow up if needed in the future. The Cook Connect Model is designed to provide students with the following:

1. **TAILORED PLANNING**
   Our clinicians will collaborate with students to create a plan with personalized recommendations based on the specific student goals with cultural sensitivity to best match the need with the resource.

2. **MORE SUPPORT, NEW STRATEGIES**
   Students crave more coping strategies and more connection with their peers. We are growing our vetted library of online info and tools, expanding access to our popular supportive groups, and creating new classes to learn more about mental health. These help to promote autonomy and empowerment to build on students' strengths.

3. **FASTER RESPONSE**
   We have designed our services so that students can be seen as quickly as possible to discuss what is going on and what services inside and outside of Cook can help holistically address their needs.
Our Services

**Vetted Mental Health Info:** An online library of videos, handouts, and other resources created or reviewed by counselors which are accessible to students for self-help or to supplement therapy

**Referral to Campus Resources:** Referral to relevant campus resources such as Hokie Wellness, Career and Professional Development, Services for Students with Disabilities, etc. following an assessment of student needs and goals

**Outreach Presentations:** Educational programming designed to enhance the learning and development of students, faculty and staff through videos, live presentations, social media, or consultation

**Workshops:** Structured and time limited educational programming to provide information and build skills related to specific mental health topics such as anxiety or mindfulness

**Animal Assisted Programs:** Outreach services or individual and group therapy involving one of our therapy dogs

**Counselor Liaisons:** Counselors who serve to connect Cook Counseling Center with campus organizations such as the Cultural and Community Centers through outreach, consultation, and helping students communicate with the counseling center

**Embedded Counseling:** Counselors who are housed within specific colleges or programs to provide therapy, assessment, outreach services, and other relevant mental health support directly to the program in which they are housed (e.g., Sports Psychology within Athletics)

**Support Groups:** Identity based groups that are focused on providing a place for sharing and receiving support and can be led by counselors or other members of the campus community

**Student Leadership:** Opportunities for students to spread mental health awareness, provide mental health programs to peers, and take on leadership roles through the Peer Assistance for Learning (PALs) program

**Academic Support:** Support for academic success, connecting students to academic resources on campus, and resources such as academic relief when mental health is a barrier to academic success

**Therapy Groups:** Educational, skill-building, or interpersonal-process based therapeutic groups that allow students to hear multiple perspectives and receive encouragement and feedback from peers in a supportive and confidential environment

**Individual Therapy:** Short-term, one on one meetings with a clinician to work on specific goals

**Psychiatry:** Psychiatric evaluations and treatment from a team of psychiatric providers

**Crisis Consultation:** Consultation for mental health emergencies available 24/7 by phone
The Chair of the Academic, Research, and Student Affairs Committee will discuss possible agenda items for future meetings.
The Chair of the Academic, Research, and Student Affairs Committee will adjourn the committee meeting.
Open Session Agenda
BUILDINGS AND GROUNDS COMMITTEE

Tour begins at 7:50 a.m.

9:30 a.m. Open Session meeting begins
The Inn at Virginia Tech – Latham Ballroom A/B

Monday, March 22, 2021

<table>
<thead>
<tr>
<th>Agenda Item</th>
<th>Reporting Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tour of the Creativity and Innovation District Living-Learning Community</td>
<td>Chris Kiwus</td>
</tr>
<tr>
<td></td>
<td>Frank Shushok</td>
</tr>
<tr>
<td>2. Welcome</td>
<td>C.T. Hill, Chair</td>
</tr>
<tr>
<td>3. Consent Agenda</td>
<td>C.T. Hill, Chair</td>
</tr>
<tr>
<td>a. Approval of the Minutes from the November 15, 2020 Meeting</td>
<td></td>
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<tr>
<td>b. Resolution on Appointment to the New River Valley Emergency Communications Regional Authority</td>
<td></td>
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<tr>
<td>c. Acceptance of the Capital Project Status Report</td>
<td></td>
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<td>4. Update on Agricultural Facilities Planning and Construction</td>
<td>Alan Grant</td>
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<td>Michael Schwarz</td>
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<tr>
<td>5. Design Review for the New Upper Quad Residence Hall</td>
<td>Liza Morris</td>
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<tr>
<td>6. Future Agenda Items and Closing Remarks</td>
<td>C.T. Hill, Chair</td>
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* Requires full Board approval.
Open Session

1. **Tour of the Creativity and Innovation District Living-Learning Community:** The Committee will tour the Creativity and Innovation District Living-Learning Community construction site.

2. **Welcome:** The Committee Chair will convene the meeting and provide welcoming remarks.

3. **Consent Agenda:** The Committee will consider for approval and acceptance the items listed on the Consent Agenda:
   
   a. **Approval of the Minutes from the November 15, 2020 Meeting:** The Committee will review for approval the minutes from the November 15, 2020 meeting.
   
   b. **Acceptance of the Capital Project Status Report:** The Committee will review for acceptance the quarterly capital project status report.

4. **Briefing on the Financial Considerations of the Virginia Tech 2020 Climate Action Commitment:** The Committee will receive a presentation on the financial considerations of the Virginia Tech 2020 Climate Action Commitment. A highly collaborative cross-divisional team worked to identify the financial impacts to achieve each prescribed pathway of the updated commitment. The team worked to analyze the economics and financial impacts of each initiative in depth and offer potential. While detailed and comprehensive, the analysis is based on assumptions regarding technologies, costs, and policies for the future that are uncertain. Current developments and future projections in energy markets and in state and federal energy policy indicate that future values of those assumptions – while uncertain now – may become more favorable for cost-effective implementation of the updated commitment. These evolving factors will be monitored and incorporated into five-year revisions in 2025 and 2030. In addition, the updated commitment requires an annual report of progress. That annual report will evaluate the assumptions and actual costs and/or savings of the commitment’s implementation.

5. **Resolution to Approve the Virginia Tech 2020 Climate Action Commitment:** The Committee will review for approval a resolution on the Virginia Tech 2020 Climate Action Commitment. Approved initially in 2009 by the Board of Visitors and revised in 2013, the Virginia Tech Climate Action Commitment serves as the university’s
guiding framework around sustainability and energy efficiency in campus operations, facilities, curriculum, and research.

In late 2019, President Sands called for its renewal and revision to ensure the most stringent climate and sustainability standards are implemented as the university continues to grow and seeks to be a leader in environmental stewardship. The mission of the revised commitment is to achieve carbon neutrality by changing our physical infrastructure, collective and individual behaviors, and educational mission; to engage everyone in creating a culture of sustainability; and to achieve these objectives through just and equitable means.

A working group of faculty experts, governance representatives, students, operations professionals, and community members led this charge and crafted the revision. Through participation in working group and subcommittee meetings, brainstorming sessions, and community engagement events, students involved in the revision process had countless opportunities to gain practical sustainability experience. Senior vice president and chief business officer, Dwayne Pinkney, sponsored the initiative. The work group was chaired by John Randolph, professor emeritus of urban affairs and planning, and co-chaired by Todd Schenk, assistant professor of urban affairs and planning and member of the Commission on Faculty Affairs.

On an aggressive timeline, the revision moved through university governance this fall, receiving approval from the Energy and Sustainability Committee, Commission on University Support, and the University Council. It was endorsed by the Faculty and Staff Senates, the Student Government Association, and the Graduate Student Assembly. The Committee received a preview of the updated Climate Action Commitment at its November 2020 meeting.

6. **Update on Agricultural Facilities Planning and Construction:** The Committee will receive an update from Alan Grant, Dean of the College of Agriculture and Life Sciences, on agricultural facilities planning and construction. Dr. Grant will be joined by Dr. Michael Schwarz, Director of the Virginia Seafood Agricultural Research and Extension Center, to discuss the impacts of the center and current improvement projects underway.

7. **Design Review for the New Upper Quad Residence Hall:** The Committee will receive the design review for the New Upper Quad Residence Hall. Located in the Northeast and Upper Quad District on the corner of Stanger Street and Old Turner Street, the New Upper Quad Residence Hall (NUQRH) will serve to expand the housing capacity for Virginia Tech Corps of Cadets with the addition of 301 beds.

The 67,876 gross square feet, five-story facility will accommodate a mix of residential rooms and support spaces on the ground floor. The second through fourth floors are residential, and the fifth will be comprised of attic space and mechanical equipment. This project will occupy the current site of Femoyer Hall, an existing facility that will be demolished as a part of this facility’s construction. Adjacent to this project's
eastern edge is the site of another capital project, the Corps Leadership and Military Science Building (CLMS), which is anticipated to begin construction in summer 2021. These two projects will be constructed concurrently and managed by a single construction manager at risk. The NUQRH is currently in working drawings with construction start and substantial completion to be coordinated with the adjacent CLMS schedule.

The $40 million project includes debt service to be provided by Residential Programs revenue and includes the $7 million supplement approved by the Board of Visitors in November 2020. This project was first proposed as part of the 2018-2024 Capital Outlay Plan.

8. **Future Agenda Items and Closing Remarks:** The Committee will discuss potential topics for inclusion on future meeting agendas.

* Requires full Board approval.
The Buildings and Grounds Committee will tour the Creativity and Innovation District Living-Learning Community construction site.

The Creativity and Innovation District Living-Learning Community is a new residence hall located on the eastern edge of the Blacksburg campus. At approximately 600 beds and 234,000 gross square feet of space, this project helps the institution develop the capacity to meet its enrollment growth goals. In addition, this facility serves an educational as well as a residential function.

Its space program promotes student interaction and transdisciplinary engagement. For project efficiency, the university selected a design-build delivery method. Construction began in spring 2019 with building occupancy targeted and on track for July 2021.

This $105.5 million project was first proposed as part of the 2018-2024 Capital Outlay Plan. Funding is derived primarily from debt instruments supported by university resources (i.e., auxiliary revenues from the Division of Student Affairs and the Department of Athletics). General education – rather than residential – space in the facility will be occupied under a facility use agreement.

The Buildings and Grounds Committee approved the project’s design preview on November 5, 2018 and the design review on June 3, 2019.
CREATIVITY AND INNOVATION DISTRICT LIVING-LEARNING COMMUNITY

Board of Visitors Tour

March 22, 2021
CREATIVITY AND INNOVATION DISTRICT LIVING-LEARNING COMMUNITY

Project Information

- New Construction: ~ 234,000 GSF
- Delivery Method: Design-Build
- Funding (Max. Authorization): $105.5 Million
- Targeted Occupancy: July 2021
CREATIVITY AND INNOVATION DISTRICT LIVING-LEARNING COMMUNITY

Site Plan

- Makerspace courtyard
- Faculty residence courtyard
- Performance courtyard
- Living-Learning community courtyard
CREATIVITY AND INNOVATION DISTRICT LIVING-LEARNING COMMUNITY

Floor Plans

First Floor

Performance space

Makerspace

Second Floor

Outdoor classroom

Faculty apartment

LLC lounge
CREATIVITY AND INNOVATION DISTRICT LIVING-LEARNING COMMUNITY

Floor Plans

Fifth Floor

Four-bedroom suite

Group study space

Sixth Floor

Double-occupancy bedroom

Resident advisor housing
CREATIVITY AND INNOVATION DISTRICT LIVING-LEARNING COMMUNITY

View from Northwest

- Gabled roof with dormers
- Glass façade and canopy along promenade

Kent Street
CREATIVITY AND INNOVATION DISTRICT LIVING-LEARNING COMMUNITY

Makerspace Courtyard

Heraldry opportunity

Makerspace

Graduate Life Center

Kent Street

Glazing system

Service area screening
CREATIVITY AND INNOVATION DISTRICT LIVING-LEARNING COMMUNITY

Faculty Residence Courtyard

Punched windows

Accessible path

Glass connector w/ lounge space

N
CREATIVITY AND INNOVATION DISTRICT LIVING-LEARNING COMMUNITY

View from Southwest

- Synthetic slate
- Precast banding
- South entrance

[Image of a building complex with labeled features]
CREATIVITY AND INNOVATION DISTRICT LIVING-LEARNING COMMUNITY

View from Southeast

Street trees

Vawter Hall

Wall Street

Accessible parking

N
CREATIVITY AND INNOVATION DISTRICT LIVING-LEARNING COMMUNITY

Performance Courtyard

LLC Lounge

Teaching studios

Performance space
CREATIVITY AND INNOVATION DISTRICT LIVING-LEARNING COMMUNITY

View from Northeast

Glass façade and canopy along promenade

Primary entrance

Future CID green

Otey Street
CREATIVITY AND INNOVATION DISTRICT LIVING-LEARNING COMMUNITY

Interior Rendering (Common Space)

View into learning spaces

Connector lounge

Natural light
CREATIVITY AND INNOVATION DISTRICT LIVING-LEARNING COMMUNITY

Interior Rendering (Common Space)
• Studio72 is open to all students regardless of major, academic year, gender identity, and artistic expertise.

• This community encourages creative approaches to problem solving, with an emphasis on collaborative art-making outside of the classroom.

• Students can participate in weekly critique session and semestery arts showcase events, as well as hands-on making workshops with visiting artists, faculty, staff, and local artists.

• Whether it’s performance art, visual art, digital art, or somewhere in between, Studio 72 is a community where curiosity, innovation, imagination, and creating art are a way of life.

• Innovate is a community open to students of all majors who are interested in becoming entrepreneurs, visionaries, and business leaders.

• Innovate assists students in developing new business ideas, taking steps from ideation to creation, or furthering current ventures through the many programs and opportunities offered.

• Even students who don’t want to start their own business can benefit from the entrepreneurial mindset and skills learned through Innovate.

• Launched by the College of Architecture and Urban Studies and the Office of Student Affairs, Rhizome explores the roles art, design, construction, planning, and analytical interventions have in shaping the built and natural environment and bringing about change.

• Rhizome is a vibrant academic community designed to complement undergraduate education.

• Students enrolled in Rhizome will have the opportunity to engage in curricular and co-curricular activities to analyze the roots, interconnections, and multidimensional character of global challenges in a yearly rotating project that integrates theory and practice.
Capital Project Information Summary – Creativity and Innovation District Living-Learning Community

BUILDINGS AND GROUNDS COMMITTEE

March 22, 2021

Title of Project:
Creativity and Innovation District Living-Learning Community (CID LLC)

Location:
The project is located on the eastern edge of Virginia Tech’s Blacksburg Campus. Directly south of the existing Graduate Life Center, the site is bound by Otey Street, Wall Street, and Kent Street. It is located across from the existing Vawter and Barringer residence halls.

Current Project Status and Schedule:
The project is currently in construction. Substantial completion is targeted for July 2021 with occupancy to begin Fall Semester 2021.

Project Description:
CID LLC is a six-story, approximately 600 bed, residence hall. It is also an important element of advancing the university’s Beyond Boundaries strategy through the built environment. The facility contains a blend of academic and residential spaces. This mix will help create a high level of energy and activity in the Creativity and Innovation District. Academic uses will increase daytime visits while residents will contribute activity at non-class hours and on weekends. Its integration of learning space and faculty-student engagement also helps intentionally blend the living and learning experiences on campus.

Brief Program Description:
The building program focuses on creating spaces for community, engagement, and creativity. On the ground floor, common and educational spaces are connected by corridors featuring exhibition opportunities for student creations (as well as windows into educational spaces). These moments allow pedestrians to witness the wide variety of making, performance, and innovation happening within the building. Residential spaces are also organized to promote connection and a sense of community at multiple scales. Clustering rooms in groups allows students to create micro-communities on each floor. By bringing them together through a central core with shared lounge space and common circulation, groups are encouraged to interact and develop a common floor identity.

Contextual Issues and Design Intent:
Contextually, a focus on community is integrated into the building’s exterior spaces and entry into the facility. The CID LLC’s primary entry and circulation are
designed to engage the natural pedestrian pathway already existing through the site. The layout encourages students and faculty to enter through the primary northern entrances, promoting opportunities for strategic collisions among diverse members of the CID. Each of the building’s primary public spaces also connects with a corresponding landscape space or courtyard, which are developed to respond to the unique conditions and needs of the adjacent program and use. Primary exterior materials include precast concrete, Hokie Stone, insulated metal panels, aluminum frame windows, storefront, and curtainwall, synthetic slate shingles, standing seam metal roof, and a green roof system.

**Funding:**
This $105.5 million project was first proposed as part of the 2018-2024 Capital Outlay Plan. Funding will be derived primarily from debt instruments supported by university resources (i.e., auxiliary revenues from the Division of Student Affairs and the Department of Athletics). General education, rather than residential, space in the facility will be occupied under a facility use agreement.

**Design/Build Team:**
Hanbury & WM Jordan
ON THE EASTERN EDGE OF VIRGINIA TECH’S BLACKSBURG CAMPUS, WHERE THE UNIVERSITY INTERSECTS WITH DOWNTOWN, THE VIEW OF THE FUTURE IS CLEAR.

HERE, THE UNIVERSITY IS MAPPING OUT A PLAYGROUND FOR THE INNOVATORS, INVENTORS, AND MAKERS WHO WILL BUILD THE WORLD OF TOMORROW. FINDING SOLUTIONS FOR COMPLEX PROBLEMS THAT RANGE FROM WATER CONSERVATION AND FOOD SUPPLY CHAINS TO ENERGY DEMANDS AND TRANSPORTATION CONGESTION WILL REQUIRE EXPERTISE FROM MANY SOURCES. FOR A GLOBAL COMMUNITY, THERE IS NO ONE-SIZE-FITS-ALL STRATEGY. BY CREATING SPACES THAT BRING TOGETHER POETS AND SCIENTISTS, ENGINEERS AND ARTISTS, AND CHEMISTS AND HISTORIANS, VIRGINIA TECH IS LEVELING THE FIELD, ADVANCING CROSS-CULTURAL RESEARCH AND DEVELOPMENT, AND EMPHASIZING THE COMBINED STRENGTHS OF SCIENCE, TECHNOLOGY, BUSINESS, AND THE HUMANITIES.

THE $250 MILLION CREATIVITY AND INNOVATION DISTRICT CAPITALIZES ON EXISTING PROGRAMS AND FACILITIES WHILE CREATING NEW SPACES AND MAKING LARGE-SCALE CHANGES TO OTHERS. THE GOAL: TO GALVANIZE INNOVATION, FROM CONCEPTION TO COMMERCIALIZATION.
Virginia Tech’s landmark district will be anchored by the Moss Arts Center; the Institute for Creativity, Arts, and Technology (ICAT), which includes the Center for Human-Computer Interaction and the Center for Research on SEAD Education; the School of Performing Arts, including Theatre 101; and the School of Visual Arts, including the Armory Gallery.

Squires Student Center, Newman Library, the Graduate Life Center at Donaldson Brown, and the Media Building will round out the district. Several will retain their traditional functions while offering enhanced spaces to foster creativity and innovation. The Media Building, however, will undergo a comprehensive renovation to support the initiative.

“We’re developing with the physical district and technologies is all about student learning and giving students the opportunity to develop in creative ways,” said Ruth Waalkes, associate provost for the arts and executive director of the Moss Arts Center. “It’s really about being able to engage with people across difference. That can mean art students working with engineers or computer scientists or collaborating across different languages or cultural practices.”

According to Cal Ribbens, head of the Department of Computer Science, “identifying a particular region of campus and intentionally creating space for this kind of learning will create more opportunities and a bigger impact that will affect entrepreneurship, partnerships with the private sector, and recruitment of talented students, staff, and faculty.

“The district] engages students in tackling broad problems that span disciplines. It’s important for students to get exposure working with people who think differently, who communicate differently, because they’re going to be part of diverse teams throughout their working lives,” Ribbens said.

Although the Creativity and Innovation District exists in a defined location on campus, the environment supports technology and other features that reach far beyond Blacksburg.

“Bridge spaces” will allow companies, students, faculty, and other scholars to work in close proximity to create, incubate, and bridge ideas into viable businesses. The collaborations will connect to existing initiatives in Blacksburg, Roanoke, and Northern Virginia.

“It’s not a district that says, ‘We’re going to do this particular project,’” said Knapp. “Instead, we’re saying, ‘If you’re interested in the creative process, from imagination to innovation, this is where you come to work with a like-minded community, no matter what your disciplinary origins.”

The district was conceived by Thanassis Rikakis, professor of bioengineering and performing arts and former provost, as a geographic extension of President Tim Sands’ Beyond Boundaries vision—specifically the concept of students and faculty from a variety of backgrounds living and working together in a shared community. The idea was to combine areas of strength for Virginia Tech so that individuals working across disciplines can come together and create. Additionally, Rikakis wanted the district in Blacksburg to engage with Virginia Tech’s outposts in Roanoke and Northern Virginia.

“We created aspirational plans where the Creativity and Innovation District would become a key feeder of innovation talent for the metropolitan D.C. area, and the partnerships and resources that would develop in metropolitan D.C. would significantly support the district in Blacksburg,” Rikakis said.

With a proven track record for projects that transcend traditional boundaries, ICAT stands as an example of how connections provide value for university researchers, students, and private partners. The institute fosters creativity and critical reflection in a living illustration of Sands’ Beyond Boundaries vision.

Attracting scholars from around the globe who work side-by-side in campus facilities such as the Cube at the Moss Arts Center, ICAT extends the reach of the district to the world. In April, ICAT partnered with the Smithsonian Lemelson Center for Innovation and Innovation to present the ACCel-erate ACC Smithsonian Creativity and Innovation Festival at the National Museum of American History in Washington, D.C. The festival showcased creative projects emerging from the nine public and six private schools that make up the Atlantic Coast Conference.

Additionally, the Creativity and Innovation District will expand creative influences from the eastern side of campus. A 596-bed residence hall is among the buildings planned for the area. The new construction, which is expected to be finished by summer 2021, will house two living-learning communities: Studio 72, for students interested in the arts and design, and Innovate, for those who want to pursue entrepreneurship. Student athletes will also live in the residence hall.

Nicky Cruz, a rising junior pursuing degrees in fashion merchandising and design and multimedia journalism with a minor in popular culture, lived in Studio 72, which is currently located in Pritchard Hall, during the 2018-19 academic year.

“Studio 72 is open to all majors, so we have a wide range of students studying different subjects,” Cruz said. “Seeing how art, science, engineering, or any other major differs with respect for creative process has introduced me to new ways of thinking and new points of view.”

Ella Davis, a rising junior majoring in geoscience, chose Studio 72 as a way to keep in touch with her artistic interests even as she pursued a science degree. Davis said the blend of students pushes her to communicate more effectively about her scientific work and has helped her better understand how concepts transcend disciplines.

“I think my favorite thing I’ve discussed with other people so far is how we all use very similar vocabularies, but we all have situational definitions,” Davis said. “How I talk about the geometry of rock beds and faults uses the same words an architecture major might when talking about the geometry of their designs, but we mean two completely different things.”

The new residence hall will boast 30,000 square feet of public space devoted to artistic, performance, and research-based experiences to support engagement and meaningful connections within the district, Blacksburg, and the world.

Plans for the facility include apartments for residential faculty. The special living arrangement, which exists in other environments across campus, will allow instructors to be fully immersed and to engage with students in ways that will enrich the community.

While the eastern side of campus is abuzz with construction and planning activities associated with the developing district, Virginia Tech leaders, faculty, and researchers are already recognizing the value of these creative collisions. The resulting projects and their outcomes will define and describe success for the district.
SHAKESPEARE’S GARDEN
This theatre installation, created by a team of faculty from the School of Performing Arts, the School of Visual Arts, and ICAT, used the spatial audio capabilities of the Cube to create a specialized immersive sound and visual experience. Participants meander along a path through the virtual space, listening to Shakespearean texts performed by Virginia Tech students.

HONEYBEE DANCES
Two assistant professors and their teams decoded the language of honeybees in a way that allows scientists around the world to interpret the insects’ highly sophisticated and complex communications. The researchers discovered a universal calibration that translates honeybee communications across sub-species and landscapes. By deciphering the messages encoded in the insects’ movements, called waggle dances, the teams hope to better understand the insects’ preferred forages and the locations of these food sources.

BELLEIVR
An ICAT grant funded the creation of BelleIVR, which allows the study of subatomic particle physics using virtual reality. The team used the Cube to create a virtual supercollider that allowed an unhampered, locomotive virtual-reality exploration of particle physics. Now, the team has created a computer version and is working on one for mobile devices.

PROSTHETIC SENSORS
A Virginia Tech professor and a team of undergraduate student researchers have made inroads in integrating electronic sensors with personalized 3D-printed prosthetics, which could one day lead to more affordable electric-powered prosthetics.

RUTH WAALKES, ASSOCIATE PROVOST FOR THE ARTS AND EXECUTIVE DIRECTOR OF THE MOSS ARTS CENTER

“ANYTHING YOU CAN DO TO TAKE CLASSIC WORK LIKE SHAKESPEARE AND THRUST IT INTO THE FUTURE HERE IN THE CUBE IS REALLY DYNAMIC. THAT IS SOMETHING THAT’S GOING TO HAPPEN ONLY HERE AT VIRGINIA TECH.”

OUTSIDE THE BOX
Learn more about the projects, events, and classes in the Creativity and Innovation District at vtmag.vt.edu.
Through special events, camps, and performances, the Creativity and Innovation District reaches people of all ages from all walks of life. These experiences connect educators and scientists with students, business leaders, and community partners.

**ACCELERATE: ACC Smithsonian Creativity and Innovation Festival**

ACCElarate, a partnership between Virginia Tech and the Smithsonian’s National Museum of American History that was first launched in 2017, celebrates creative exploration and research at the nexus of science, engineering, arts, and design. At the 2019 festival, which featured research projects from universities across the Atlantic Coast Conference, nearly 62,000 visitors interacted with innovators and experienced new technologies.

**VIRGINIA TECH SCIENCE FESTIVAL**

Since 2014, the Virginia Tech Science Festival has offered dozens of free hands-on, minds-on learning interactive booths and activities to showcase physics, space, engineering, communication, geology, health and medicine, history, transportation, computers, chemistry, and more. Nearly 5,000 visitors of all ages attend the festival each year. The university funds transportation to enable school children from underserved areas to attend the festival.

**ICAT Creativity and Innovation Day**

ICAT Creativity and Innovation Day demonstrates Virginia Tech’s latest innovations combining science, engineering, arts, and design through dozens of experiences, performances, demonstrations, expo-style exhibits, and a panel discussion.

**Cube Fest**

Cube Fest features spatial music, immersive aural experiences, and 3D audio technology. The annual festival brings together international audio technology experts, computer engineers, music technology experts, musicians, and composers who present lectures, conduct workshops, and perform original compositions specifically created for high-density loudspeaker arrays.
The Cube is a highly adaptable space for multidisciplinary, collaborative research and experimentation. Both a state-of-the-art theatre and a high-tech laboratory, the four-story Cube offers visualization, motion tracking, and immersive 3D audio. Users can experience total immersion in virtual realities. Researchers and students merge contemporary technology with traditional performance to pursue new forms of artistic expression and multimedia art.

**THE CUBE**

The Sandbox is an idea incubator. Teams meet to brainstorm, discuss visions, and roll up their sleeves to start projects. The flexible meeting space encourages collaborative creativity with moveable furniture, dry-erase boards, and a projection array.

**THE SANDBOX**

Students use the Digital Arts and Animation Studio, located in the library, to access high-end tools used in the production of digital film, web design, and animation. In the Digital Interactive Sound and Intermedia Studio, researchers and students merge contemporary technology with traditional performance to pursue new forms of artistic expression and multimedia art.

**DIGITAL STUDIOS**

A partnership between the Division of Information Technology, the School of Visual Arts, and ICAT, this advanced rendering class blends architecture, industrial design, and interior design. Students boost their technology skills, learning advanced techniques to create complex animations.

**USING HIGH-PERFORMANCE COMPUTING TO BOOST STUDENT CREATIVITY**

Service/User Experience Class

A demonstration of Virginia Tech’s Beyond Boundaries initiative, this class brings together students in industrial design, computer science, and business, and is co-taught by faculty from each discipline. Teams of students create projects to solve problems related to disability and aging. The class emphasizes Virginia Tech’s motto, *Ut Prosim* (That I May Serve).

**SERVICE/USER EXPERIENCE CLASS**

In the Creativity and Innovation District, Virginia Tech is promoting student coursework and developing spaces that blend academics, social interactions, and research studies to support the sort of bold thinking that will lead to real solutions for global challenges.

**IN THE CREATIVITY AND INNOVATION DISTRICT, VIRGINIA TECH IS PROMOTING STUDENT COURSEWORK AND DEVELOPING SPACES THAT BLEND ACADEMICS, SOCIAL INTERACTIONS, AND RESEARCH STUDIES TO SUPPORT THE SORT OF BOLD THINKING THAT WILL LEAD TO REAL SOLUTIONS FOR GLOBAL CHALLENGES.**

**HOW DO CREATIVE COLLISIONS AFFECT LEARNING?**

Logan Wallace, Amanda Loman, Jim Stroup, EW
Tim Baird named faculty principal for the Creativity and Innovation District Living-Learning Community

One thing is for sure: there will be learning. And Tim Baird, newly appointed faculty principal for the Creativity and Innovation District Living-Learning Community (CID LLC) at Virginia Tech, is excited about the possibilities.

“I’ll become a better teacher from living with students - undoubtedly - because I’ll learn! And the students will become better teachers, because they’ll learn about learning. Most of the learning that occurs in our lives never gets called learning. But we’re going to call it out at the CID LLC. Late night trip to the supermarket? Learning. Nasty split-up with boyfriend? Learning. Failed exam? Learning. Envy over roommate’s success? Learning. Singing contest in the elevator at 3 a.m. on a Tuesday? Learning. There’s definitely going to be some learning there.”

Timothy D. Baird is associate professor of geography at Virginia Tech. He has been a Senior Fellow at the Institute for Creativity, Arts, and Technology at Virginia Tech since 2016, and director of the Pathways to Sustainability Minor since 2015. His wife, Kiyah J. Duffey, is co-founder and CEO of Kizingo LLC and director of strategic innovation for the Fralin Life Sciences Institute.

Baird, Duffey, and their three children will live alongside students in a specially designed apartment within the new Creativity and Innovation District complex. And they are looking forward to the challenges and opportunities of the job.

“When we’re at home, we let our guard down. We take our masks off and put on comfortable sweats. We’re vulnerable, and also available. We’re more ourselves. Learning should happen there, too. AND we need to call it learning,” said Baird. “Residential learning communities get everyone out of their comfort zone a bit. I imagine it will be pretty weird for college students to step on match-box cars on their way to the bathroom. And it will certainly be weird for our family to have 600 houseguests. But I’m quite sure that beautiful things can grow from that weirdness - with intention. We know this will be a tremendous experience for our kids. An adventure really. They will be 12, 9, and 8 when we move in.”
“For me, the residential learning communities harken back to my own college days at a small, liberal arts school,” said Duffey. “With only 1,600 undergraduates (and no grad students) we had a lot of access to our professors, including the opportunity to know them personally and to see their lives outside of campus. This was invaluable to me, and I like that the residential learning communities help to provide this for students at Virginia Tech.”

Virginia Tech announced plans for the Creativity and Innovation District in 2016. Site and utility preparations for the CID LLC began in spring 2019. It is slated to open in 2021.

The Creativity and Innovation District Living-Learning Community is a 225,000-gross-square-foot residential building designed to house about 600 students. Already the residence halls themselves are an exercise in experiential learning, with students leading key aspects of the design process. The facility will include innovative spaces, such as performance and practice studios, maker spaces, collaboration and research areas, and creative lounges. It will be home to Studio 72 and Innovate, Virginia Tech’s arts and entrepreneurship LLCs. It will also be home to many student-athletes and a third living-learning program currently under development.

Many campus entities are coming together to make the CID LLC a truly collaborative and innovative space: the School of Performing Arts; School of Visual Arts; Institute for Creativity, Arts, and Technology; Apex Systems Center for Innovation and Entrepreneurship; Athletics; and Housing and Residence Life. It is located next to the Graduate Life Center between Kent and Otey streets and is part of the larger Creativity and Innovation District project.

“The joining of these communities - and in this space - is very exciting to me,” said Duffey. “As an entrepreneur whose business relies equally on creativity, innovation, and business acumen, I was immediately intrigued by the possibilities of the CID. I have had the pleasure of engaging students in this role as a business owner and found the process energizing. If I could help to engage their interests and inspire their own aspirations, I wanted to be a part of that.”

“We discussed the shallow stereotypes associated with art and business - and the potential cynicism that may lie between them,” the couple wrote in their application for the faculty principal position. “And we considered the student-athletes with whom we would share this space - whose journeys through college may look quite different from others’ but whose social and emotional needs may be quite the same - and who may have emerging or established artists and entrepreneurs inside them. If we could handpick groups from campus to live with, I don’t think we could make a more inspired choice than the groups that are slated to comprise the CID LLC. Supporting the existing bonds within these
groups, while promoting new discussion, trust, and engagement across groups, all within an environment where students embrace a practice of bringing themselves into their academics and their academics into themselves, would be a life-defining endeavor for us.”

The residential college concept dates back to the 12th century. The idea evolved at Oxford and Cambridge universities, which provide models for residential colleges in the United States. Unique to Virginia Tech’s approach to living-learning communities is the sense that learning - wherever and however it occurs - is valued, supported, and integrated into the student experience.

Vice President for Student Affairs Frank Shushok Jr. is the lead architect of Living-Learning Program at Virginia Tech. Shortly after he came to the university in 2009, he began laying the groundwork for residential learning environments that emphasize student engagement with faculty and staff, provide opportunities to gain knowledge both in and out of the classroom, and create physical spaces that encourage and enrich the learning experience.

“It is not just about connecting students’ academic and co-curricular experiences,” said Shushok. “It is about building communities that support students in their exploration of disciplines, perspectives, and self. Our goal is to provide seamless learning and growth and the opportunity to form strategic partnerships and unexpected collaborations.”

There are now 16 Living-Learning Programs at Virginia Tech - 13 living-learning communities centered on a theme or major, and three residential colleges, each led by a live-in faculty principal:

- **Pablo A. Tarazaga**, faculty principal for the Honors Residential Commons in East Ambler Johnston, is associate professor and John R. Jones Faculty Fellow in the mechanical engineering department at Virginia Tech. Additionally, he is a principal faculty member in the Myers-Lawson School of Construction, the and director of the Adaptive Structures and Testing Laboratory and the Virginia Tech Smart Infrastructure Laboratory.
- **C.L. Bohannon** is faculty principal for the Leadership and Social Change Residential College. Bohannon is associate professor and director of the Community Engagement Lab in Landscape Architecture in the College of Architecture and Urban Studies at Virginia Tech.
- **Danna Agmon**, faculty principal in the Residential College at West Ambler Johnston, is associate professor of history and core faculty in ASPECT (Alliance for Social, Political, Ethical, and Cultural Thought) in the College of Liberal Arts and Human Sciences.

The faculty principal plays an important role in redefining the residential experience by strengthening the academic and intellectual climate of the community. Faculty principals are the intellectual leaders of the community and are charged with creating a culture where students are taught and encouraged to engage meaningfully in their college experience inside and outside the classroom.

Virginia Tech’s living-learning communities connect students’ academic and co-curricular experiences to create a supportive, dynamic learning environment that becomes home. “Learning should be happening everywhere, all the time. Exposing ourselves to a diversity of ideas, experiences, opinions, and backgrounds through partnerships across campus is what will provide us with the greatest chance of creating something meaningful and sustainable,” said Duffy.

“I think we will learn how to balance work and personal life,” she said. “I think we will learn how to make the most of our personal space, shared space, and of campus. I think we will learn about the ways we haven’t imagined that our kids will grow and benefit from this experience. We have the incredible good fortune to have current and previous faculty principals’ shoulders to lean on. And one day we can do the same for another faculty principal.”

“The CID Living-Learning Community is a shining example of how vision, knowledge, and ingenuity can come together to expand learning experiences far beyond the classroom,” said Executive Vice President and Provost Cyril R. Clarke. “This endeavor is a clear illustration of our commitment to leverage creativity and technology to prepare students to serve and improve a global society. The CID LLC will also serve as a beacon for attracting top talent to our university to advance our transdisciplinary communities and Beyond Boundaries vision.”

The Creativity and Innovation District is a key component of the university’s strategic plan. The Virginia Tech Difference: Advancing Beyond Boundaries. One of the university’s strategic milestones is to have 67 percent of students in Living-Learning Programs by 2024. In fall 2013, the number was 25.2 percent. By fall 2019 the number had risen to 38.1 percent.

“Community grows slowly. Culture even more so,” said Baird. “And this new building will house several communities, each with its own culture and set of traditions. We must begin by listening, attending groups’ events, learning names and stories, being available, and building trust. At some point ideas will sprout and we will begin to experiment with new traditions, including new ways to use our physical space, actively and passively, to nudge us all towards community. We will keep sight of our positionality, our whiteness, our heterosexuality, and our gender identities to guide our practice of empathy and inclusion for all students, from all backgrounds. And without a doubt, we will seek advice from the
knowledgeable and experienced members of our campus community, most certainly the other Faculty Principals, LLC Directors, and student life professionals who live Ut Prosim [That I May Serve] each day. And when we stumble, as we assuredly will, we will ask for forgiveness - and a helping hand to start again."

Read the full interview with Tim Baird and Kiyah Duffey.

Written by Sandy Broughton

CONTACT:

Kristen Abell
540-231-5258

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Welcome

BUILDINGS AND GROUNDS COMMITTEE

March 22, 2021

The Buildings and Grounds Committee Chair will open with welcoming remarks.
The Committee will consider for approval and acceptance the items listed on the Consent Agenda.

Consent Agenda
  a. Approval of the Minutes from the November 15, 2020 Meeting
  
* b. Resolution on Appointment to the New River Valley Emergency Communications Regional Authority

  c. Acceptance of the Capital Project Status Report

* Requires full Board approval.
The Buildings and Grounds Committee of the Board of Visitors of Virginia Polytechnic Institute and State University met on Sunday, November 15, 2020, at 2:30 p.m. A quorum of the Buildings and Grounds Committee was present.

**Buildings and Grounds Committee Members**

**Present:**
- Mr. Horacio Valeiras (Rector)
- Mr. C.T. Hill
- Ms. Sharon Brickhouse Martin
- Ms. Shelly Butler Barlow
- Mr. Mehul Sanghani

**Absent:**
- Ms. Tish Long (Vice Rector)

**Other Board Members Present:**
- Mr. Ed Baine
- Ms. Carrie Chenery
- Ms. Greta Harris
- Ms. Anna James
- Dr. Melissa Nelson
- Mr. Chris Petersen
- Mr. Jeff Veatch

**Constituent Representatives Present:**
- Dr. Eric Kaufman (Faculty Representative)
- Ms. Camellia Pastore (Undergraduate Student Representative)
- Ms. Tamarah Smith (Staff Representative)
- Ms. Sabrina Sturgeon (Graduate Student Representative)

Also present were the following Virginia Tech staff members:
- President Timothy Sands, Ms. Kim O’Rourke (Secretary to the Board), Mr. Mac Babb, Mr. Eric Brooks, Mr. Bob Broyden, Dr. Cyril Clarke, Mr. Denny Cochrane, Mr. Al Cooper, Dr. Lance Collins, Dr. Kristy Daniels, Mr. Corey Earles, Ms. Kari Evans, Mr. Kevin Foust, Major General Randal Fullhart, Mr. Bryan Garey, Mr. Mark Gess, Dr. Alan Grant, Ms. Wendy Halsey, Ms. Kay Heidbreder, Ms. Elizabeth Hooper, Ms. Mary-Ann Ibeziako, Dr. Frances Keene, Dr. Chris Kiwus, Ms. Sharon Kurek, Ms. Jamie Lau, Mr. Jack Leff, Mr. Ken Miller, Ms. Liza Morris, Dr. Saied Mostaghimi, Ms. Heidi Myers, Mr. Bob Muse, Mr. Justin Noble, Mr. Mark Owczarski, Dr. Dwayne Pinkney, Ms. Katie Polidoro, Dr. John Randolph, Dr. Emily Satterwhite, Dr. Todd Schenk, Mr. John Tarter, Dr. Don Taylor, Mr. Dwyn Taylor, Mr. Jon Clark Teglas, Ms. Tracy Vosburgh, Dr. Robin White, Mr. Chris Yianilos
Also present were the following guests:
Mr. Henri Gendreau

Open Session

1. **Welcome:** The Committee Chair convened the meeting and provided welcoming remarks. Dr. Dwayne Pinkney introduced new Assistant Vice President for Facilities Operations, Wendy Halsey, and also detailed the launch of a new high-performance team to facilitate strategic, enterprise-wide long-range physical planning; advancement of the capital outlay program; space and land use; and real estate activities. Bob Broyden, Associate Vice President for Campus Planning and Capital Assets was introduced as the leader of this team. Bob Broyden will report dually to Chris Kiwus, Vice President for Campus Planning, Infrastructure, and Facilities and Ken Miller, Vice President for Finance.

2. **Consent Agenda:** The Committee approved and accepted the items listed on the Consent Agenda:

   a. **Approval of the Minutes from the August 25, 2020 Meeting:** The Committee approved the minutes from the August 25, 2020 meeting.

   b. **Acceptance of the Sustainability Annual Report:** The Committee accepted the sustainability annual report. Virginia Tech serves as a model community for a sustainable society and is committed to advancing sustainability in academics (curriculum & research), engagement, operations, planning, and administration. The university maintains a gold rating from the Association for Advancement of Sustainability in Higher Education (AASHE) using the Sustainability Tracking, Assessment, and Rating System (STARS).

   c. **Acceptance of the Capital Project Status Report:** The Committee accepted the quarterly capital project status report.

3. **Virginia Tech 2020 Climate Action Commitment:** The Committee received a presentation on the Virginia Tech 2020 Climate Action Commitment. Approved initially in 2009 by the Board of Visitors and revised in 2013, the Virginia Tech Climate Action Commitment serves as the university's guiding framework around sustainability and energy efficiency in campus operations, facilities, curriculum, and research. In late 2019, President Sands called for its renewal and revision to ensure the most stringent climate and sustainability standards are implemented as the university continues to grow and seeks to be a leader in environmental stewardship. The mission of the revised commitment is to achieve carbon neutrality by changing our physical infrastructure, collective and individual behaviors, and educational mission; to engage everyone in creating a culture of sustainability; and to achieve these objectives through just and equitable means. A working group of faculty experts, governance representatives, students,
operations professionals, and community members led this charge and crafted the revision. Through participation in working group and subcommittee meetings, brainstorming sessions, and community engagement events, students involved in the revision process had countless opportunities to gain practical sustainability experience. Senior vice president and chief business officer, Dwayne Pinkney, sponsored the initiative. The work group was chaired by John Randolph, professor emeritus of urban affairs and planning, and co-chaired by Todd Schenk, assistant professor of urban affairs and planning and member of the Commission on Faculty Affairs. On an aggressive timeline, the revision moved through university governance this fall, receiving approval from the Energy and Sustainability Committee, Commission on University Support, and the University Council. It was endorsed by the Faculty and Staff Senates, the Student Government Association, and the Graduate Student Assembly. Dr. Pinkney’s team is crafting a comprehensive financial model based on the pathways and outcomes prescribed by the commitment. It is anticipated that the Board will receive a resolution to approve the commitment at the March meeting.

4. Update on Utilities and Energy Management Initiatives: The Committee received a presentation regarding campus utilities and energy management initiatives from Assistant Vice President for Infrastructure, Mary-Ann Ibeziako. Mary-Ann highlighted the university’s commitment to providing an effectively managed and operated infrastructure to support the institution’s learning, discovery, and engagement missions. In support of this, the Division of Campus Planning, Infrastructure, and Facilities is responsible for the production, delivery, and management of safe, reliable, and efficient utility and energy systems, while effectively stewarding university resources and the environment. In support of the Virginia Tech Climate Action Commitment, the university also strives to become a leader in environmental excellence. As a strategic driver, the university has proactively established programming to champion tangible reduction in energy consumption on campus.

* 5. Resolution to Approve the Virginia Tech Crisis and Emergency Management Plan and Addendum: The Committee reviewed for approval a resolution to adopt the university’s Crisis and Emergency Plan and addendum in accordance with Code of Virginia. The Code requires that every four years a public institution of higher education conduct a comprehensive review and revision of its Crisis and Emergency Management Plan to ensure that it remains current, and the plan shall be adopted formally by the Board of Visitors. The plan has been reviewed by the Safety and Security Policy Committee and was promulgated by President Sands in June 2019. The Committee recommended the Resolution to Approve the Virginia Tech Crisis and Emergency Management Plan and Addendum to the full Board for approval.

6. Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistic Act Report: The Committee received the annual campus security and fire safety report for Virginia Tech that is compiled and published by the Virginia
Tech Police Department. This annual report is required by the Higher Education Opportunity Act and the Jeanne Clery Disclosure of Campus Security Policy and Campus Crimes Statistics Act. The purpose of the report is to provide information about security on campus, to include: campus and community crime statistics, fire statistics and safety information, policy information, safety tips, resource phone numbers, and a brief overview of the many services the university provides. This item was presented by Mac Babb, Chief of Police and Director of Security.

7. **Update on Agricultural Facilities Planning and Construction:** The Committee received an update from Alan Grant, Dean of the College of Agriculture and Life Sciences, on agricultural facilities planning and construction. Dr. Grant was joined by associate professors Robin White and Kristy Daniels to discuss the Metabolic Research Laboratory and its impact on their work.

8. **Design Review for the Corps Leadership and Military Science Building:** The Committee approved the design review for the Corps Leadership and Military Science Building.

9. **Future Agenda Items and Closing Remarks:** The Committee discussed potential topics for inclusion on future meeting agendas.

There being no further business, the meeting adjourned at 4:30 p.m.

**Joint Committee Members Present:**
- Mr. Horacio Valeiras (Rector)
- Mr. Ed Baine
- Mr. C.T. Hill
- Ms. Sharon Brickhouse Martin
- Ms. Shelly Butler Barlow
- Ms. Anna James
- Mr. Mehul Sanghani

**Absent:**
- Ms. Tish Long (Vice Rector)
- Mr. Preston White

**Other Board Members Present:**
- Ms. Carrie Chenery
- Ms. Greta Harris
- Dr. Melissa Nelson
- Mr. Chris Petersen
Mr. Jeff Veatch

Constituent Representatives Present:
Dr. Eric Kaufman (Faculty Representative)
Ms. Camellia Pastore (Undergraduate Student Representative)
Ms. Tamarah Smith (Staff Representative)
Ms. Sabrina Sturgeon (Graduate Student Representative)

Also present were the following Virginia Tech staff members:
President Timothy Sands, Ms. Kim O’Rourke (Secretary to the Board), Mr. Mac Babb, Mr. Eric Brooks, Mr. Bob Broyden, Dr. Cyril Clarke, Mr. Al Cooper, Mr. Corey Earles, Ms. Kari Evans, Mr. Kevin Foust, Major General Randal Fullhart, Mr. Bryan Garey, Mr. Mark Gess, Ms. Wendy Halsey, Ms. Kay Heidbreder, Ms. Mary-Ann Ibeziako, Dr. Frances Keene, Dr. Chris Kiwus, Ms. Sharon Kurek, Ms. Jamie Lau, Mr. Ken Miller, Ms. Liza Morris, Ms. Heidi Myers, Mr. Bob Muse, Mr. Justin Noble, Mr. Mark Owczarski, Dr. Dwayne Pinkney, Mr. John Tarter, Mr. Dwyn Taylor, Mr. Jon Clark Teglas, Ms. Tracy Vosburgh, Mr. Chris Yianilos

Joint Open Session with the Finance and Resource Management Committee

* 1. Approval of Resolution for a Capital Lease for the 3200 Commerce Street Property: The Committees reviewed for approval a resolution for a capital lease for the 3200 Commerce Street property. The acquisition of 3.29 acres of property with 10,434 square feet of additional office and garage space at 3200 Commerce Street is an essential asset for growth by housing VTTI’s technical support operations and facilitate vehicle repairs and modifications, streamlining access to research vehicles, and promoting the expedient staging of research props and fixtures. This space also provides a conditioned area for sponsors and researchers to interact with vehicle systems and is a critical staging area for modified vehicles and equipment that are not fully weather rated. The Virginia Tech Foundation (Foundation) acquired the property on behalf of the university for $1.52 million on May 29, 2020. The funding plan calls for the university to enter a lease with the Foundation at a rate sufficient to retire the acquisition costs, normal operating costs, and property carrying costs. VTTI will fund the lease costs from its returned overhead revenues. The university and VTTI are ready to enter a lease with the Foundation and have developed an entirely nongeneral fund resource plan sufficient to cover the $1.52 million property acquisition costs, future property carrying, and maintenance costs. The Committees recommended the Resolution for a Capital Lease for the 3200 Commerce Street Property to the full Board for approval.

* 2. Approval of Resolution to Supplement the New Upper Quad Residence Hall: The Committees reviewed for approval a resolution to supplement the New Upper Quad Residence Hall project. The Board of Visitors approved the New Upper Quad Residence Hall project at its June 3, 2019 meeting. This approved project will be located on the corner of Stanger Street and Old Turner Street adjacent to the New Corps Leadership and Military Sciences Building. The project includes a program of
300 beds to support the enrollment growth plans for the Corps of Cadets to reach 1,400 students. The original project authorization includes a $33 million budget which is based on a university residential cost model of $110,000 per bed. The project scope includes razing Femoyer Hall and the design, construction, and furnishings for the new residential facility. Subcontractor pricing at the completion of preliminary designs show the costs for the project are $133,000 per bed, or $40 million. The primary drivers that push the cost over $110,000 per bed are associated with the site, a necessary feature for the Corps of Cadets, including the complexity and extensiveness of utility relocations, volume of contaminated soils remediation and hazardous materials handling for the demolition of Femoyer Hall, extensive grade changes to address ADA compliance, and market pricing. The costs above reflect the acceptance of value engineering alternatives. This request is for authorization to move forward with a $7 million supplement to adjust the total project authorization for the New Upper Quad Residence Hall project to $40 million and to complete the project. The Committees recommended the Resolution to Supplement the New Upper Quad Residence Hall to the full Board for approval.

There being no further business, the joint meeting adjourned at 4:43 p.m.

* * * * * * * *

The Buildings and Grounds Committee of the Board of Visitors of Virginia Polytechnic Institute and State University reconvened on Sunday, November 15, 2020, at 4:45 p.m. for a tour of the university’s Power Plant. A quorum of the Buildings and Grounds Committee was present.

**Buildings and Grounds Committee Members**

**Present:**
Mr. Horacio Valeiras (Rector)
Mr. C.T. Hill
Ms. Shelly Butler Barlow
Mr. Mehul Sanghani

**Absent:**
Ms. Tish Long (Vice Rector)

**Other Board Members Present:**
Mr. Ed Baine
Mr. Chris Petersen

**Constituent Representatives Present:**
Dr. Eric Kaufman (Faculty Representative)
Ms. Camellia Pastore (Undergraduate Student Representative)
Ms. Tamarah Smith (Staff Representative)
Ms. Sabrina Sturgeon (Graduate Student Representative)
Also present were the following Virginia Tech staff members:
Ms. Kim O'Rourke (Secretary to the Board), Mr. Ted Acord, Mr. Billy Dudding, Mr. Bryan Garey, Mr. Mark Hayes, Ms. Mary-Ann Ibeziako, Dr. Chris Kiwus, Mr. Todd Robertson, Mr. John Tarter, Mr. Dwyne Taylor, Mr. Jon Clark Teglas

**Open Session**

1. **Tour:** The Committee toured the university's Power Plant. The plant plays an integral role in the university's infrastructure and provides campus buildings with a portion of their heat, hot water, and electricity needs.

   There being no further business, the meeting adjourned at 5:49 p.m.

* * * * * * * * * *

* Requires full Board approval.*
RESOLUTION ON APPOINTMENT TO THE
NEW RIVER VALLEY EMERGENCY COMMUNICATIONS REGIONAL AUTHORITY

WHEREAS, the New River Valley Emergency Communications Regional Authority (the Authority) consists of five members who are responsible for the management and operation of the Authority – each of the political subdivisions have the right to appoint one member, and one at-large member is appointed jointly by the Virginia Tech Board of Visitors, the Blacksburg and Christiansburg Town Councils, and the Montgomery County Board of Supervisors; and

WHEREAS, the Board of Visitors approved the appointment of Kevin L. Foust, Associate Vice President for Safety and Security, as the university’s representative to the Authority, effective December 1, 2019, to complete the current four-year term expiring August 31, 2023; and

WHEREAS, Kevin L. Foust has announced his intent to retire from Virginia Tech on or about June 1, 2021, thereby vacating his role as the university’s representative to the Authority; and

WHEREAS, Virginia Tech desires to appoint Dwayne L. Pinkney, Senior Vice President and Chief Business Officer, as the university’s representative to the Authority, effective June 1, 2021, to complete the current four-year term expiring August 31, 2023;

NOW, THEREFORE, BE IT RESOLVED, that Dwayne L. Pinkney, Senior Vice President and Chief Business Officer, be appointed as the university’s representative to and member on the New River Valley Emergency Communications Regional Authority effective June 1, 2021, to complete the current four-year term expiring August 31, 2023.

RECOMMENDATION:

That the resolution recommending that Dwayne L. Pinkney, Senior Vice President and Chief Business Officer, be appointed as the university’s representative to the New River Valley Emergency Communications Regional Authority Board of Directors be approved.

March 22, 2021
CAPITAL PROJECTS
STATUS REPORT

Prepared for the Buildings and Grounds Committee

March 22, 2021
Project Portfolio

- 20+ projects (active and completed/1-year warranty phase)
- Total value exceeds $1B
- Adds 2M gross square feet (GSF) of additional space
- Renovates nearly 300K GSF of existing space
## Capital Construction Executive Summary (Progressive)

**Date Prepared:** 25 FEB 2021

### Project Title

<table>
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<tr>
<th>Project Title</th>
<th>Total Project Cost (SM)</th>
<th>New Const (GSF)</th>
<th>Renovation (GSF)</th>
<th>CY 2021</th>
<th>CY 2022</th>
<th>CY 2023</th>
<th>CY 2024</th>
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<td>VTC Biomedical Research Expansion (PPEA)</td>
<td>$91.7</td>
<td>139,586</td>
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<td>Athletic Weight Room Renovations &amp; Expansion</td>
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<td>4,880</td>
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<td>Q2</td>
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<td>Q2</td>
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<td>Student Athlete Performance Center (Jameson Hall)</td>
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<td>10,800</td>
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<td>Improve Kentland Facilities (Phase II) – Various Locations</td>
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<td>Gas-Fired Boiler at Central Steam Plant</td>
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<td>Creativity &amp; Innovation District Living Learning Community</td>
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<td>Chiller Plant Phase II</td>
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<td>Holden Hall Renovations</td>
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<td>Livestock &amp; Poultry Research Facilities (Ph I) – Various Locations</td>
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<td>Data &amp; Decision Sciences Building (D&amp;DS)</td>
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<td>Multi-Modal Transit Facility</td>
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<td>New Upper Quad Residence Hall</td>
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<td>Corps Leadership &amp; Military Science Building</td>
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<td>Innovation Campus - Academic Building</td>
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<td>HITT Hall and New Dining Facility</td>
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<td>Randolph Hall Replacement (Design Only) (Note 1)</td>
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<td>Undergraduate Science Laboratory Building (Note 1)</td>
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<td>Dietrick First Floor &amp; Plaza Renovation</td>
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<td>Student Wellness Improvements (War Memorial Gym &amp; McComas Hall)</td>
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<td>Global Business &amp; Analytics Complex Residence Halls</td>
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**Note 1:** Construction not yet authorized; construction dates (where shown) are "earliest possible"
Under Construction
VTC Biomedical Research Expansion

**Project Title:** VTC Biomedical Research Expansion (PPEA) $91.7 139,586

**Status:**
- Construction complete

**Next Actions:**
- Conclude warranty period and close-out contract

**Legend:**
- Design
- Construction

**Designer:** AECOM (Carilion Contract)
**Builder:** Skanska (Carilion Contract)

**VTC Biomedical Research Expansion (PPEA)**
- Total Project Cost ($M): 91.7
- New Const (GSF): 139,586

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Total Project Cost ($M)</th>
<th>New Const (GSF)</th>
<th>Renovation (GSF)</th>
<th>CY 2020</th>
<th>CY 2021</th>
<th>CY 2022</th>
<th>CY 2023</th>
<th>CY 2024</th>
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<tbody>
<tr>
<td>VTC Biomedical Research Expansion (PPEA)</td>
<td>91.7</td>
<td>139,586</td>
<td></td>
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</table>
Athletic Weight Room Renovations & Expansion

Status:
• Construction complete

Next Actions:
• Conclude warranty period and close-out contract

Designer: Hanbury
Builder: Thor

Legend:
- Design
- Construction

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<tr>
<td>Athletic Weight Room Renovations</td>
<td>$4.5</td>
<td>4,880</td>
<td>17,640</td>
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<td>Q1</td>
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</table>
## Student Athlete Performance Center

**Design-Bid-Build**

**BOV Authorized**

---

**Status:**
- Construction complete

**Next Actions:**
- Conclude warranty period and close-out contract

---

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Total Project Cost (SM)</th>
<th>New Const (GSF)</th>
<th>Renovation (GSF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Athlete Performance Center (Jameson Hall)</td>
<td>$20.1 10,800</td>
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</table>

**Legend:**
- Orange: Design
- Purple: Construction

- **Designer:** Hanbury
- **Builder:** Branch Builds

---

### CY 2020
- FY20: Q1, Q2, Q3, Q4
- FY21: Q3, Q4

### CY 2021
- FY21: Q1, Q2, Q3, Q4
- FY22: Q1, Q2, Q3, Q4

### CY 2022
- FY22: Q1, Q2, Q3, Q4
- FY23: Q1, Q2, Q3, Q4

### CY 2023
- FY23: Q1, Q2, Q3, Q4
- FY24: Q1, Q2, Q3, Q4

### CY 2024
- FY24: Q1, Q2, Q3, Q4
- FY25: Q1, Q2
**Improve Kentland Facilities (Ph II)**

**Status:**
- APR Building construction complete
- BETR Building construction complete
- MRL Building construction complete

**Next Actions:**
- APR Building: Close out contract (warranty period complete)
- BETR Building: Conclude warranty period and close-out contract
- MRL Building: Conclude warranty period and close-out contract

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Total Project Cost ($M)</th>
<th>New Const (GSF)</th>
<th>Renovation (GSF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve Kentland Facilities (Phase II) – Various Locations</td>
<td>$12.5</td>
<td>28,403</td>
<td></td>
</tr>
</tbody>
</table>

| Designer: | Spectrum Design | Builder(s): | APR = Snyder; MRL & BETR = CPPI |

<table>
<thead>
<tr>
<th>CY 2020</th>
<th>CY 2021</th>
<th>CY 2022</th>
<th>CY 2023</th>
<th>CY 2024</th>
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<tbody>
<tr>
<td>JAN-MAR</td>
<td>APR-JUN</td>
<td>JUL-SEP</td>
<td>OCT-DEC</td>
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<tr>
<td>FV20 Q1</td>
<td>Q2 Q3 Q4</td>
<td>Q1 Q2 Q3 Q4</td>
<td>Q1 Q2 Q3 Q4</td>
<td>Q1 Q2 Q3 Q4</td>
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<td>FV21 Q4</td>
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<td>Q1 Q2 Q3 Q4</td>
<td>Q1 Q2 Q3 Q4</td>
<td>Q1 Q2 Q3 Q4</td>
</tr>
</tbody>
</table>

**Legend:**
- Design: Orange
- Construction: Purple
### Gas-Fired Boiler at Central Steam Plant

**Status:**
- Project on track (99% complete)
- New boiler fully installed

Next Actions:
- Complete boiler performance testing & commissioning
- Anticipated completion in March 2021

#### Legend:
- Design
- Construction

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Total Project Cost ($M)</th>
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<tbody>
<tr>
<td>New Package Boiler #12</td>
<td>8.2</td>
<td>N/A</td>
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</table>

**Designer:** AEI  
**Builder:** Southern Air  

**Boiler Authorized:** BOV Authorized

<table>
<thead>
<tr>
<th>FY20</th>
<th>FY21</th>
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<tr>
<td>Q1</td>
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<td>APR-JUN</td>
<td>JUL-SEP</td>
<td>OCT-DEC</td>
</tr>
</tbody>
</table>

**Next Actions:**
- Complete boiler performance testing & commissioning
- Anticipated completion in March 2021
Creativity & Innovation District LLC

Status:
• Project on track (80% complete)

Next Actions:
• Anticipated completion in July 2021

Legend:
- Design
- Construction

Project Title | Total Project Cost ($M) | New Const (GSF) | Renovation (GSF)
--- | --- | --- | ---
Creativity & Innovation District Living Learning Community | $105.5 | 234,000

Designer: Hanbury
Builder: WM Jordan

Design-Build
BOV Authorized
**Chiller Plant (Phase II)**

**Status:**
- Project on track (75% complete)

**Next Actions:**
- Anticipated completion in August 2021

**Legend:**
- Design
- Construction

**Designer:** AEI

**Builder:** Faulconer

### Project Title

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Total Project Cost ($M)</th>
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<th>Renovation (GSF)</th>
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<tbody>
<tr>
<td>Chiller Plant Phase II</td>
<td>$42.9</td>
<td>N/A</td>
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</table>
Holden Hall Renovations

Legend:  
- Design  
- Construction

Status:
- Project on track (40% complete)

Next Actions:
- Anticipated completion in early January 2022

Designer: Moseley  
Builder: WM Jordan

State Authorized
CM at Risk

Project Title | Total Project Cost ($M) | New Const (GSF) | Renovation (GSF) |
--- | --- | --- | --- |
Holden Hall Renovation | $74.9 | 81,000 | 20,240 |

CM at Risk

13
Livestock & Poultry Research Facilities (Ph I)

Status:
- Swine, Poultry & Equine Facilities awarded
- Bid package for Beef Facility re-advertised

Next Actions:
- Seek administrative supplement of State funding for 3 storage barns & remaining demolition package
## Data & Decision Sciences Building

### Status:
- GMP contract awarded (within budget)
- Construction underway

### Next Actions:
- Anticipated completion in January 2023

### Legend:
- Design
- Construction

<table>
<thead>
<tr>
<th>Designer: Moseley</th>
<th>Builder: Kjellstrom &amp; Lee</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Title</strong></td>
<td><strong>Total Project Cost ($M)</strong></td>
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<td>Data &amp; Decision Sciences Building (D&amp;DS)</td>
<td>$79.0</td>
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<td>Q3</td>
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<td>Q3</td>
<td>Q4</td>
<td>Q1</td>
<td>Q2</td>
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</tbody>
</table>

**CM at Risk**
**State Authorized**
Multi-Modal Transit Facility

Site Plan

Legend:
- Design
- Construction

Status:
- Project awarded to W. M. Schlosser Company, Inc.

Next Actions:
- Construction start in March 2021

Design-Bid-Build
ToB Project

Designer: Wendel (ToB contract)
Builder: Schlosser (ToB contract)

Site Plan
In Design
On-Campus Projects In Design

- Undergraduate Science Laboratory Building
- GBAC LLCs
- Slusher Hall Replacement
- Dietrick First Floor & Plaza Renovations
- Corps Leadership & Military Science Building
- New Upper Quad Residence Hall
- Randolph Hall Replacement
- HITT Hall and New Dining Facility
- Student Wellness Improvements
New Upper Quad Residence Hall

Legend:
- Design
- Construction

Project Title: New Upper Quad Residence Hall (Femoyer Hall Replacement)
Total Project Cost ($M): 33.0
New Const (GSF): 70,200

Status:
- Working Drawings under review
- BOV Review during March 2021 session

Next Actions:
- Finalize Working Drawings
- Establish construction GMP
- Targeting construction start by July 2021

Next Actions:
- Finalize Working Drawings
- Establish construction GMP
- Targeting construction start by July 2021

Legend: Design                                            Construction

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Total Project Cost ($M)</th>
<th>New Const (GSF)</th>
<th>Renovation (GSF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Upper Quad Residence Hall (Femoyer Hall Replacement)</td>
<td>33.0</td>
<td>70,200</td>
<td></td>
</tr>
</tbody>
</table>

Designer: Clark-Nexsen
Builder: Vannoy
Project Title

Total Project Cost ($M)

New Const (GSF)

Renovation (GSF)

FY20

FY21

FY22

FY23

FY24

FY25

JAN-MAR

APR-JUN

JUL-SEP

OCT-DEC

JAN-MAR

APR-JUN

JUL-SEP

OCT-DEC

JAN-MAR

APR-JUN

JUL-SEP

OCT-DEC

JAN-MAR

APR-JUN

JUL-SEP

OCT-DEC

JAN-MAR

APR-JUN

JUL-SEP

OCT-DEC

Legend:

Design

Construction

Status:

• Construction pricing established (within budget)

Next Actions:

• Award GMP contract
• Targeting site/utilities construction start in March 2021

Designer: Clark-Nexsen

Builder: Vannoy

CM at Risk

BOV Authorized
**Innovation Campus Academic Building**

---

**Legend:**
- Design
- Construction

**Status:**
- Preliminary Design review underway
- Working with JBG Smith (development partner) to finalize shared infrastructure costs

**Next Actions:**
- Begin Working Drawings phase in April 2021
- BOV Review targeted for June 2021 session
- Targeting establishment of GMP #1 (first phase of construction) in summer 2021 for September 2021 construction start

---

**Designer:** SmithGroup  
**Builder:** Whiting-Turner

---

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Total Project Cost ($M)</th>
<th>New Const (GSF)</th>
<th>Renovation (GSF)</th>
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<tbody>
<tr>
<td>Innovation Campus Academic Building #1</td>
<td>$275.0</td>
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CM at Risk  
State Authorized
### Designer: Cooper Cary
### Builder: W M Jordan

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Cost ($M)</th>
<th>New Const (GSF)</th>
<th>Renovation (GSF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HITT Hall and New Dining Facility</td>
<td>TBD</td>
<td>101,000</td>
<td></td>
</tr>
</tbody>
</table>

**Legend:**
- Design
- Construction

**Status:**
- W M Jordan selected as CMaR
- Project cost estimates validated against budget
- Preliminary Design phase underway

**Next Actions:**
- BOV Preview targeted for June 2021 session
- Construction start targeted for October 2021

**CM at Risk**
- BOV Authorized
**Undergraduate Science Laboratory Building (Design Only)**

**CMAR**

State Authorized

### Status:
- Design is complete
- Waiting General Assembly to authorize construction

### Next Actions:
- Finalize Budget Request for General Assembly consideration
- Upon construction authorization, coordinate CMaR development of GMP

---

**Legend:**
- Design
- Construction

<table>
<thead>
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<th>Project Title</th>
<th>Total Project Cost (SM)</th>
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<tbody>
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<td>Undergraduate Science Lab (Design Only)</td>
<td>$74.8</td>
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</table>

**Designer:** ZGF

**Builder:** Skanska

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<th>Project Title</th>
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<tr>
<td>Undergraduate Science Lab (Design Only)</td>
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<td>FK24</td>
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</tbody>
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Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2

**PENDING STATE CONSTRUCTION FUNDING**
Tennis Center Improvements (Design Only)

Status:
• Working Drawing phase underway

Next Actions:
• Complete Working Drawing and pause project pending funds and BOV construction authorization

Designer: Tymoff & Moss

Builder: TBD
Randolph Hall Replacement (Design Only)

CMaR (Pending)
State Authorized

Status:
- Project authorized for preliminary design only
- A/E design services procurement is underway
- CMaR procurement is underway

Next Actions:
- Complete A/E procurement
- Initiate Schematic Design phase
- Finalize CMaR procurement
- Construction funding request deferred to 2023

Legend:
- Design
- Construction

<table>
<thead>
<tr>
<th>Designer: TBD</th>
<th>Builder: TBD</th>
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</table>

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<td>FY24</td>
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<tr>
<td>Replace Randolph Hall (Design Only)</td>
<td>(Note 1)</td>
<td>$11.0</td>
<td>284,000</td>
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</table>

(Nota 1)
Life, Health, Safety, Accessibility & Code Compliance

Status:
- Quinn Evans selected as A/E
- A/E conducting feasibility study that will form basis of design

Next Actions:
- Finalize preferred design alternative
- Initiate Schematic Design phase

Legend:
- Design
- Construction

Status:
- Quinn Evans selected as A/E
- A/E conducting feasibility study that will form basis of design

Next Actions:
- Finalize preferred design alternative
- Initiate Schematic Design phase

Legend:
- Design
- Construction

Designer: Quinn Evans
Builder: TBD

<table>
<thead>
<tr>
<th>Project Title</th>
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<th>New Const (GSF)</th>
<th>Renovation (GSF)</th>
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<tbody>
<tr>
<td>Life, Health, Safety, Accessibility and Code Compliance</td>
<td>$3.1</td>
<td>N/A</td>
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</table>
### Dietrick First Floor & Plaza Renovation

**Project Title:** Dietrick First Floor & Plaza Renovation

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<th>Total Project Cost ($M)</th>
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<th>Renovation (GSF)</th>
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<tbody>
<tr>
<td>8.3</td>
<td>6,298</td>
<td>11,960</td>
</tr>
</tbody>
</table>

**Legend:**
- Design
- Construction

**Status:**
- Project “bid-busted” in May 2020
- Construction budget = $6M; Low bid = $7.3M

**Next Actions:**
- Determine appropriate course of action for project

**Designer:** Hanbury

**BOV Authorized**

**Builder:** TBD

**Design-Bid-Build**

### Timeline

<table>
<thead>
<tr>
<th>FY21</th>
<th>FY22</th>
<th>FY23</th>
<th>FY24</th>
<th>FY25</th>
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<tbody>
<tr>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
<td>Q1</td>
</tr>
</tbody>
</table>

Legend:
- Q1: Design
- Q2: Bid
- Q3: Build
- Q4: Completed
### Global Business & Analytics Complex Residence Halls

#### Project Title
Dietrick Dining Hall First Floor Enclosure & Spirit Plaza

#### Total Project Cost
- $8.3M
- $6,298
- $11,960

#### Design-Bid-Build
- BOV Authorized

---

**Legend:**
- Orange: Design
- Purple: Construction

**Status:**
- Project on hold – initial programming over budget
- Project was previously slated for D/B procurement

**Next Actions:**
- Determine appropriate course of action for project

---

**Designer:** TBD  
**Builder:** TBD

<table>
<thead>
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<th>Project Title</th>
<th>Total Project Cost (SM)</th>
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<td>OCT-DEC</td>
<td>JAN-MAR</td>
</tr>
<tr>
<td></td>
<td>FY20</td>
<td></td>
<td></td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
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<tr>
<td></td>
<td>FY21</td>
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<td>FY22</td>
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<td></td>
<td>FY24</td>
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<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
<td>Q1</td>
</tr>
<tr>
<td></td>
<td>FY25</td>
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<td></td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
<td>Q1</td>
</tr>
</tbody>
</table>

| Dietrick Dining Hall First Floor Enclosure & Spirit Plaza | $8.3M | $6,298 | $11,960 | ON HOLD |
### Slusher Hall Replacement

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Total Project Cost (SM)</th>
<th>New Const (GSF)</th>
<th>Renovation (GSF)</th>
<th>FY20</th>
<th>FY21</th>
<th>FY22</th>
<th>FY23</th>
<th>FY24</th>
<th>FY25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slusher Hall Replacement</td>
<td>TBD</td>
<td>196,000</td>
<td>ON HOLD</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Legend:**
- Design
- Construction

**Status:**
- Project on hold – initial programming over budget

**Next Actions:**
- Determine appropriate course of action for project

**Designer:** Clark Nexsen

**Builder:** TBD

**Design-Build Non-General Funds**
### Student Wellness Improvements

<table>
<thead>
<tr>
<th>Designer: Cannon Design</th>
<th>Builder: Whiting-Turner</th>
</tr>
</thead>
</table>

- **Status:**
  - CMaR Guaranteed Maximum Price (GMP) is over budget

- **Next Actions:**
  - Determine appropriate course of action for project

---

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Total Project Cost (SM)</th>
<th>New Const (GSF)</th>
<th>Renovation (GSF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Wellness Improvements (War Memorial Gym &amp; McComas Hall)</td>
<td>TBD</td>
<td>30,124</td>
<td>217,108</td>
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</table>

Legend: Design | Construction

<table>
<thead>
<tr>
<th>Status</th>
<th>BOV Authorized</th>
<th>CM at Risk</th>
</tr>
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<tbody>
<tr>
<td>Design</td>
<td>Construction</td>
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</table>

<table>
<thead>
<tr>
<th>FY21</th>
<th>FY22</th>
<th>FY23</th>
<th>FY24</th>
<th>FY25</th>
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</thead>
<tbody>
<tr>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
<td>Q1</td>
</tr>
<tr>
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<tr>
<td>Q4</td>
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<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
</tr>
</tbody>
</table>

Legend:
- **Design**
- **Construction**
Definitions

- **State Authorized**: Authorized and funded (whole or in part) by the Virginia General Assembly
- **BOV Authorized**: Authorized and funded by the Virginia Tech Board of Visitors

- **Schematic Design Phase** = 0% to approx 20% design complete
- **Preliminary Design Phase** = Approx 20% to approx 50% design complete
- **Working Drawing Phase** = Approx 50% to 100% design complete
- **GMP** = Guaranteed Maximum Price
Design-Bid-Build (DBB):
• A/E completes full design
• Invitation For Bid (IFB) issued…contract awarded to lowest bidder

Construction Manager at Risk (CMaR):
• A/E completes full design
• CMaR’s compete for project during early stage of design
• CMaR hired during schematic design phase
• When final designs are complete, CMaR develops Guaranteed Maximum Price (GMP)

Design-Build (D/B):
• A/E completes partial design (“criteria docs”)
• D/B teams (builder + A/E) compete for project and propose full price for project delivery
• Selection based upon “best value”
• D/B team completes design and executes construction
Update on Agricultural Facilities Planning and Construction

Alan L. Grant, Ph.D.
Dean of the College of Agriculture and Life Sciences

Michael H. Schwarz, Ph.D.
Director, Virginia Seafood AREC

March 22, 2021
INVESTING IN THE FUTURE OF AGRICULTURE AND LIFE SCIENCES

- **COMPLETE**: Metabolic Research Laboratory – completes the Improve Kentland Facilities project

- **UNDERWAY**:
  - Livestock & Poultry Research Facilities, Phase 1 (10 new buildings)
  - Seafood AREC Replacement Project

- **PROPOSED**:
  - System-wide AREC Improvements (capital and non-capital projects)
  - Compost Facility (Climate Action Commitment)
  - Human and Agricultural Biosciences Building 2
  - Livestock & Poultry Research Facilities, Phase 2
New Virginia Seafood Agricultural Research and Extension Center

Completion: Nov 2021
LOCATION MAP

Virginia Agricultural Experiment Station ARECs

VSAREC
22,383 ft², three-story building located in frequently flooded area of downtown Hampton, VA. Current building 12,000 ft²

First floor – 15 space parking garage with two entry stair towers and elevator

Second floor – Seafood processing, Aquaculture, technician offices, training lab space

Third floor – Microbiology lab, faculty and student offices, classroom, board room, and bunk suite.
Ongoing programs

- Sustainable Food Production Systems

- Food Safety and Quality
- Alternative Proteins and Bioprocessing
- Alternative Seafood Products
Ongoing programs

- Economics, Marketing, and Regulations
  - Regulatory cost studies
  - Financial benchmarks
  - Economic impact modelling
  - Perceptions of seafood
Ongoing programs

- Food Quality, Safety, and Consumer Education

- National Food Safety Training Center
- Sanitation
- Allergen Controls
- ServeSafe®
- 2019: 48 Companies; 233 clients, 107 HACCP Certificates
Ongoing programs

- Sustainable Fisheries and Aquaculture

- Workforce development
- Applied Research and Development
- Conservation
- Public Education
Ongoing programs

- Seafood Processing, Validation and Engineering (Green Industries)
  - Industry Training
  - Process Validations
  - New Product Development
  - Value-added
New Program Investments: Supporting the Center for Advanced Innovations in Agriculture

- Controlled Environmental Agriculture
- New Seafood Frontiers
- Smartfeeds
- Robotics/automation
- Traceability, Blockchain, and Big Data Management
New Program Investments: Supporting the new Center for Coastal Studies (CCS)

- Coastal Resiliency
- Offshore Technologies
New Program Investments: Increasing Personnel

- **2019** – 11 Faculty/staff
- **2020**
  - New: 1 Research Specialist, 1 Research Scientist, 3 Research Associates, 2 grad students
- **2021**
  - New: 1 Research Scientist, 1 Research Associate, and 1 Communications Associate
  - Projected: 1 Tenure Track Faculty
Program Financial Expansion

- **Research Expenditures**
  - FY 17: Implemented 5-year goal of $1 million/Yr
- **Concurrent Grants CY 2020**
  - 28 Grants totaling $4,350,000
- **Proposals already in development CY2021 (April submission)**
  - $18,500,000
Dawn of a new VSAREC Program
### College of Agriculture Life Sciences (CALS) Projects Status Report

**BUILDINGS AND GROUNDS COMMITTEE
March 22, 2021**

---

**CAPITAL PROJECTS:**

**PROJECTS IN CONSTRUCTION:**

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Project Description</th>
<th>Estimated Total Project Cost</th>
<th>Fund Source</th>
<th>Project Teams</th>
<th>Contract Completion Date</th>
<th>Project Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve Kentland Facilities, Phase II</td>
<td>Applied Reproductive Facility (APF): 4.5 ft Board in Lin-Men for pipelining and breeding instruction; Bovine Extension, Teaching and Research (BETR) Facility: 3,000 sqft classroom building and 2,000 sqft demonstration area at livestock center on Plantation Road; Metabolic Research Laboratory (MRL): 11,300 sqft animal laboratory at the Dairy Center at Kentland Farm.</td>
<td>$12,463,000</td>
<td>Capital Outlay</td>
<td>Spectrum</td>
<td>Fall 2020</td>
<td>All projects have reached substantial completion and have certificate of occupancy. Minor corrective work is ongoing and owner furnished equipment installation is in progress.</td>
</tr>
<tr>
<td>New Virginia Seaford AREC Building</td>
<td>31,038 sq ft, 3-story building to replace existing aging and structurally unsound facility in Hampton, Virginia with state-of-the-art aquaculture research and extension facilities. Facility owned and developed by Virginia Tech Foundation.</td>
<td>$9,240,000</td>
<td>Various</td>
<td>IRMM</td>
<td>Fall 2021</td>
<td>Notice to Proceed issued in September, 2020. Some initial delays due to unforeseen conditions underground. Those have been resolved and project is on track.</td>
</tr>
<tr>
<td>Pkg 1: Contract awarded, Notice to Proceed (NTP) date being negotiated Pkg 2: Bid was due to Contractor withdrawal Pkg 3: Contract awarded, NTP being negotiated Pkg 4: Contract awarded, NTP being negotiated. Pkg 5: Design on hold.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROJECTS IN DESIGN:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROJECT INITIATION / PLANNING STAGE:</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

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**NON-CAPITAL PROJECTS:**

**PROJECTS COMPLETED: SINCE LAST REPORT:**

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Project Description</th>
<th>Fund Source</th>
<th>Project Teams</th>
<th>Project Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock Center Grain Bin Relocation</td>
<td>To clear the site for planned new equipment storage building as part of Livestock and Poultry Research Facilities (LPRF). Phase 1 capital project, 4 large grain bins must be relocated to a new site, requiring construction of new concrete pad, power connections, and access improvements.</td>
<td>LPRF</td>
<td>WBA</td>
<td>Fall 2020</td>
</tr>
<tr>
<td>Glade Road Greenhouse Wind Damage Repair</td>
<td>Due to wind damage of an old fiberglass greenhouse, existing structure to be demolished.</td>
<td>Insurance</td>
<td>Keller</td>
<td>January 2021</td>
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</table>

**PROJECTS IN CONSTRUCTION:**

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Project Description</th>
<th>Estimated Total Project Cost</th>
<th>Fund Source</th>
<th>Project Teams</th>
<th>Contract Completion Date</th>
<th>Project Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor Projects ($250,000 and under)</td>
<td>Shaddeau Roofing</td>
<td>$54,000</td>
<td>CAIS / VAS</td>
<td>-</td>
<td>-</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Mattern and Craig</td>
<td>Eastern Shore AREC House 1223 Bath Tub Replacement</td>
<td>$180,000</td>
<td>-</td>
<td>Multiple</td>
<td>-</td>
<td>Ongoing</td>
</tr>
<tr>
<td>E.T. Gresham</td>
<td>Eastern Shore AREC Heads House 0816 Repairs</td>
<td>$27,000</td>
<td>CALS / VAS</td>
<td>-</td>
<td>-</td>
<td>February 2021</td>
</tr>
<tr>
<td>MLMM</td>
<td>Eastern Shore AREC House 0859 Repairs</td>
<td>$81,000</td>
<td>CAIS / VAS</td>
<td>-</td>
<td>-</td>
<td>March 2021</td>
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<tr>
<td>E.T. Gresham</td>
<td>Eastern Shore AREC Headhouse Boiler Replacement</td>
<td>$430,000</td>
<td>-</td>
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<td>-</td>
<td>Summer 2021</td>
</tr>
<tr>
<td>Shaddeau Roofing</td>
<td>Shaddeau Roofing</td>
<td>$11,260,000</td>
<td>-</td>
<td>Multiple</td>
<td>-</td>
<td>Summer 2021</td>
</tr>
<tr>
<td>Mattern and Craig</td>
<td>AVEC Exterior Signage Upgrades</td>
<td>$50,000</td>
<td>Multiple</td>
<td>Multiple</td>
<td>-</td>
<td>TBD</td>
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</table>

**PROJECTS IN DESIGN:**

<table>
<thead>
<tr>
<th>Project Name</th>
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<th>Fund Source</th>
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<th>Contract Completion Date</th>
<th>Project Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turkey Center Service Building 603 Roof and Misc Repairs</td>
<td>Existing bulkhead, which protects the freshwater intake, pump system and pump house has deteriorated beyond repair. Project will replace wooden bulkhead with vinyl, and replace deteriorated door and roof on pump house.</td>
<td>Maintenance Reserve</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Hampton Roads AREC Repair Bulkhead &amp; Pump House</td>
<td>After leaks were discovered in the roof above new restroom renovation project, building condition assessment determined more extensive work was necessary to preserve building including new roof, gutters, windows, doors, and other misc. repairs.</td>
<td>Maintenance Reserve</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
</tbody>
</table>

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**PROJECTS UNDER DESIGN:**

<table>
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<td>Mattern and Craig</td>
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<td>Multiple</td>
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<tr>
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<td>Eastern Shore AREC Heads House 0816 Repairs</td>
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<td>CALS / VAS</td>
<td>-</td>
<td>-</td>
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<td>Shaddeau Roofing</td>
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<td>Multiple</td>
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<td>-</td>
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<tr>
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<td>Multiple</td>
<td>Multiple</td>
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<td>Multiple</td>
<td>Multiple</td>
<td>-</td>
</tr>
<tr>
<td>PROJECT NAME</td>
<td>PROJECT DESCRIPTION</td>
<td>ESTIMATED TOTAL PROJECT COST</td>
<td>FUND SOURCE</td>
<td>PROJECT TEAMS</td>
<td>CONTRACT COMPLETION DATE</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Smithfield Equine Classroom Renovations</td>
<td>Building envelope repairs, accessibility improvements to classroom and restroom, HVAC upgrade to add cooling, classroom interior enhancements</td>
<td>$150,000</td>
<td>Maintenance Reserve, various</td>
<td>S Design</td>
<td>TBD</td>
</tr>
<tr>
<td>Tidewater AREC - Batten Hall waterproofing</td>
<td>Batten Hall (portion of Building 0771) is subject to chronic flooding in basement requiring assessment of waterproofing and mitigation measures.</td>
<td>$235,000</td>
<td>Maintenance Reserve</td>
<td>WOP Associates</td>
<td>TBD</td>
</tr>
<tr>
<td>Beef Barn Repairs</td>
<td>Exterior and interior demolition followed by the installation of new roofing, hay loft flooring, doors, windows, and lighting. This work was originally included in LRF/ Phase 1, but removed due to scope concerns.</td>
<td>$795,000</td>
<td>Maintenance Reserve</td>
<td>HCW, TEA</td>
<td>TBD</td>
</tr>
<tr>
<td>Judging Position Repairs</td>
<td>Exterior and interior demolition followed by installation of new roofing, doors, windows, HVAC system, lighting, a covered walkway and exterior paint. This work was originally included in LRF/ Phase 1, but removed due to scope concerns.</td>
<td>$362,000</td>
<td>Maintenance Reserve</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Southwest Virginia AREC - Exterior Building Repairs</td>
<td>Repair roof, siding and door damage on Tobacco Barns 1 (0749) and 2 (0747), Cattle Barn 4 &amp; 0741 and Workshop/Machinery Shed (0742).</td>
<td>$245,000</td>
<td>Maintenance Reserve</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Eastern Virginia AREC - Ring 4880 Experiment Building Renovation</td>
<td>Renovation and upgrade of existing under-utilised office, workshop and meeting space.</td>
<td>$180,000</td>
<td>CALS / VAES / Maintenance Reserve</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Eastern Shore AREC - Exterior Building Repairs</td>
<td>Multiple buildings are in need of exterior repairs. Head House (3124) and Shop Building (3125) is in need of structural repairs to walls and repointing. Implement Shed (3116), Sweet Potato Storage (3127), Produce Grading (3128), and Insectary (3129) need exterior waterproofing, door repair, painting repairs and systems.</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Beef Cattle Reproduction Center LED Upgrade</td>
<td>Conversion of existing lighting in Beef Reproduction Barn and Beef Reproduction Shed to LED for enhanced visibility and energy performance.</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Southern Piedmont AREC</td>
<td>Road and parking lot repairs.</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Ag Engineering Building, 85564 Roof and Drainage Repairs</td>
<td>Mitigate flooding into workshop areas and repair roof leaks.</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Washington Street Greenhouse Complex Renovations</td>
<td>Repairs and upgrades to modernize aging controlled growth environments.</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Compost Facility (to support main campus &amp; surrounding farms)</td>
<td>CAES is experiencing significant and growing land pressure to meet nutrient management plan requirements, which would be greatly eased by the proposed compost facility. This initiative also has an extremely high level of student support as well as potential partnerships with Dining Services, Athletics and Facilities. Project is included in 228-2 Capital Budget Request, but is a high priority for separate, earlier funding, if possible, due to regulatory risk exposure from limited manure storage during winter months.</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Turkey Farm Processing Building Repair</td>
<td>Interior Demolition followed by the installation of new cold-formed steel clad interior partitions, new doors and window, fiberglass reinforced plastic paneling and epoxy painted floors. This work was originally included in LRF/ Phase 1, but removed due to scope concerns.</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Campbell Arena Repairs</td>
<td>New enclosure of the existing open-air steel structure constructed of metal panel siding over steel girts and posts. This work was originally included in LRF/ Phase 1, but removed due to scope concerns.</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Moore Farm Barn 0501 Repairs</td>
<td>This highly visible and prominent barn is for many purposes such as lambing of sheep, lambing facility, hay bale storage, emergency storage for weather-affected crops, and equipment and parts storage. The condition of the barn would greatly ease and improve the existing facilities.</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
</tbody>
</table>

**PROJECT INITIATION / PLANNING STAGE**

- **Southern Piedmont AREC**
  - Road and parking lot repairs.
  - TBD
  - TBD

- **Ag Engineering Building, 85564 Roof and Drainage Repairs**
  - Mitigate flooding into workshop areas and repair roof leaks.
  - TBD
  - TBD
  - TBD

- **Washington Street Greenhouse Complex Renovations**
  - Repairs and upgrades to modernize aging controlled growth environments.
  - TBD
  - TBD
  - TBD

- **Compost Facility (to support main campus & surrounding farms)**
  - CAES is experiencing significant and growing land pressure to meet nutrient management plan requirements, which would be greatly eased by the proposed compost facility. This initiative also has an extremely high level of student support as well as potential partnerships with Dining Services, Athletics and Facilities. Project is included in 228-2 Capital Budget Request, but is a high priority for separate, earlier funding, if possible, due to regulatory risk exposure from limited manure storage during winter months.
  - TBD
  - TBD
  - TBD

- **Turkey Farm Processing Building Repair**
  - Interior Demolition followed by the installation of new cold-formed steel clad interior partitions, new doors and window, fiberglass reinforced plastic paneling and epoxy painted floors. This work was originally included in LRF/ Phase 1, but removed due to scope concerns.
  - TBD

- **Campbell Arena Repairs**
  - New enclosure of the existing open-air steel structure constructed of metal panel siding over steel girts and posts. This work was originally included in LRF/ Phase 1, but removed due to scope concerns.
  - TBD
  - TBD

- **Moore Farm Barn 0501 Repairs**
  - TBD
  - TBD
  - TBD

**CALS / VAES / FUND SOURCE**

- **Southern Piedmont AREC**
  - Road and parking lot repairs.
  - TBD

- **Ag Engineering Building, 85564 Roof and Drainage Repairs**
  - TBD

- **Washington Street Greenhouse Complex Renovations**
  - Repairs and upgrades to modernize aging controlled growth environments.
  - TBD

- **Compost Facility (to support main campus & surrounding farms)**
  - CAES is experiencing significant and growing land pressure to meet nutrient management plan requirements, which would be greatly eased by the proposed compost facility. This initiative also has an extremely high level of student support as well as potential partnerships with Dining Services, Athletics and Facilities. Project is included in 228-2 Capital Budget Request, but is a high priority for separate, earlier funding, if possible, due to regulatory risk exposure from limited manure storage during winter months.
  - TBD

- **Turkey Farm Processing Building Repair**
  - Interior Demolition followed by the installation of new cold-formed steel clad interior partitions, new doors and window, fiberglass reinforced plastic paneling and epoxy painted floors. This work was originally included in LRF/ Phase 1, but removed due to scope concerns.
  - TBD

- **Campbell Arena Repairs**
  - New enclosure of the existing open-air steel structure constructed of metal panel siding over steel girts and posts. This work was originally included in LRF/ Phase 1, but removed due to scope concerns.
  - TBD

- **Moore Farm Barn 0501 Repairs**
  - TBD

**PROJECT TEAMS**

- **Southern Piedmont AREC**
  - TBD

- **Ag Engineering Building, 85564 Roof and Drainage Repairs**
  - TBD

- **Washington Street Greenhouse Complex Renovations**
  - TBD

- **Compost Facility (to support main campus & surrounding farms)**
  - TBD

- **Turkey Farm Processing Building Repair**
  - TBD

- **Campbell Arena Repairs**
  - TBD

- **Moore Farm Barn 0501 Repairs**
  - TBD

**PROJECT STATUS**

- **Southern Piedmont AREC**
  - TBD

- **Ag Engineering Building, 85564 Roof and Drainage Repairs**
  - TBD

- **Washington Street Greenhouse Complex Renovations**
  - TBD

- **Compost Facility (to support main campus & surrounding farms)**
  - TBD

- **Turkey Farm Processing Building Repair**
  - TBD

- **Campbell Arena Repairs**
  - TBD

- **Moore Farm Barn 0501 Repairs**
  - TBD

**DATE**

- **Southern Piedmont AREC**
  - TBD

- **Ag Engineering Building, 85564 Roof and Drainage Repairs**
  - TBD

- **Washington Street Greenhouse Complex Renovations**
  - TBD

- **Compost Facility (to support main campus & surrounding farms)**
  - TBD

- **Turkey Farm Processing Building Repair**
  - TBD

- **Campbell Arena Repairs**
  - TBD

- **Moore Farm Barn 0501 Repairs**
  - TBD
<table>
<thead>
<tr>
<th>PROJECT NAME</th>
<th>PROJECT DESCRIPTION</th>
<th>ESTIMATED TOTAL PROJECT COST</th>
<th>FUND SOURCE</th>
<th>PROJECT TEAMS</th>
<th>CONTRACT COMPLETION DATE</th>
<th>PROJECT STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moores Farm Shed (0810) Repairs</td>
<td>This hay shed was built in the 1950's and received heavy use for that purpose. Over the years its condition has continued to worsen and recent wind and snow storms have accelerated the deterioration. In order to ensure research projects utilizing recently renovated fields, the Beef Cattle unit now needs to utilize this shed as a working facility for cattle. This would involve pouring a concrete floor and moving in cattle working equipment. However, the structural condition of this facility is poor and should be addressed prior to additional use. It may be more cost-effective to rebuild than to repair this structure.</td>
<td>TBD</td>
<td>Maintenance Reserve</td>
<td>TBD</td>
<td>TBD</td>
<td>Scope and budget development.</td>
</tr>
<tr>
<td>Alston H. Smith AREC - Repair paving and parking</td>
<td>Existing asphalt parking lot and drives are deteriorating and in need of repair.</td>
<td>$16,000</td>
<td>Maintenance Reserve</td>
<td>TBD</td>
<td>TBD</td>
<td>Scope and budget development. Construction planned in FY 2023.</td>
</tr>
<tr>
<td>Eastern Virginia AREC - Repair Experiment Building</td>
<td>Building HVAC system has failed and is not working. Electrical and plumbing are outdated. Building is not ADA accessible. General condition is deteriorating.</td>
<td>TBD</td>
<td>Maintenance Reserve</td>
<td>TBD</td>
<td>TBD</td>
<td>Scope and budget development. Construction planned in FY 2022.</td>
</tr>
<tr>
<td>NAB Adele Areb - Exterior Repairs</td>
<td>Main Building (1030) needs window replacement, repairs of rotting soffit/flashings, deck repair and bathroom upgrade. Lath House (1030C) roof and trusses need repair.</td>
<td>$10,000</td>
<td>Maintenance Reserve</td>
<td>TBD</td>
<td>TBD</td>
<td>Scope and budget development. Construction planned in FY 2023.</td>
</tr>
<tr>
<td>Sherrardale Valley AREC - Repair/Replace Sheep Barn</td>
<td>Sheep Barn (0864) has rotten posts at ground level and leaking roof. The building should be evaluated for repair or replacement.</td>
<td>$76,000</td>
<td>Maintenance Reserve</td>
<td>TBD</td>
<td>TBD</td>
<td>Scope and budget development.</td>
</tr>
<tr>
<td>Southern Piedmont AREC - Building Repairs</td>
<td>Packhouse roof (0867) in need of plumping repairs and upgrade to be reconfigured for ADA access. Packhouse roof is leaking and needs repair. Repair/replacement and five deteriorated lean-to equipment storage sheds attached to four tobacco curing barns (0810A, 0810B, 0810C, 0810D)</td>
<td>$122,000</td>
<td>Maintenance Reserve</td>
<td>TBD</td>
<td>TBD</td>
<td>Scope and budget development. Construction planned in FY 2022.</td>
</tr>
<tr>
<td>Tidewater AREC - Water system repair</td>
<td>Water line from well to main office complex is failing in multiple locations and requires frequent repairs. Project is to install new 2-inch water line away from landscaping to reduce need for future repairs.</td>
<td>$26,000</td>
<td>Maintenance Reserve</td>
<td>TBD</td>
<td>TBD</td>
<td>Scope and budget development.</td>
</tr>
<tr>
<td>Smithfield Equine Complex</td>
<td>New WeatherSTEM weather station and sky camera installation at all ARECs and three campus farm locations.</td>
<td>$104,000 initial cost and $37,000 annually</td>
<td>CALS / VAES</td>
<td>CALS IT</td>
<td>Completed Summer 2019</td>
<td>All are functioning and data is readily accessible through web and WeatherSTEM app interfaces.</td>
</tr>
<tr>
<td>WeatherSTEM</td>
<td>Installation of new audio and video equipment for AREC to provide enhanced conferencing capability in meeting rooms. Phase 1 includes Alson H. Smith, Eastern Shore, Hampton Roads, Southern Piedmont and Tidewater ARECs.</td>
<td>$24,000</td>
<td>CALS / VAES</td>
<td>CALS IT</td>
<td>Fall 2019</td>
<td>Phase 1 (four ARECs) is completed. Scope and schedule for Phase 2 project (remaining ARECs) to be evaluated upon completion of Phase 1.</td>
</tr>
</tbody>
</table>

**INFORMATION TECHNOLOGY (IT) EVALUATION & PROJECTS**

Completed through February 26, 2021. New information is in bold.
## Bandwidth and Internet Connectivity

**ARECs**
- All ARECs except Shenandoah Valley (50 Mb) have 200 Mb service.
- Southwest Virginia (50 Mb), Reynolds Homestead (50 Mb), Eastern Shore (50 Mb) and Virginia Seaboard (50 Mb)
  - Northern Piedmont Center also has a 50 Mb cable connection.
- Goal is to upgrade all to at least 200 Mb. 200 Mb service for Hampton Roads has been ordered.
- Eastern Shore has been upgraded to 100 Mb service. Reynolds Homestead is in the process of having an order placed for 100 Mb service.

**Campus Farm Locations**
- Kentland Farm has adequate 200 Mb service. Moore Farm and Urban Horticulture Center have a 50 Mb cable service which is currently adequate. The CSES Research Farm also has a 50 Mb cable connection. From Fork Research Center has a 50 Mb fiber connection. Turkey Farm cable service is being upgraded from 50 Mb to 200 Mb during LPRF phase 1, no additional cost.
- Upgrades are needed to provide sufficient bandwidth for existing video-based research and future initiatives after LPRF phase 1 construction. Turfgrass center is currently using a cellular hotspot for internet service. Providing standard service requires excessive installation cost. Alternative service providers are being sought. No complaints have been received about service to facilities in the Livestock Center along Plantation Road, but service levels and coverage is being reviewed.

**Citizens Band Radio Service (CBRS) technology was investigated and deemed unsuitable for this project.**

**Estimated Total Project Cost**

<table>
<thead>
<tr>
<th>Project</th>
<th>Estimated Total Project Cost</th>
<th>Fund Source</th>
<th>Project Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandwidth and Internet Connectivity</td>
<td>$310,000 Annually</td>
<td>CALS / VAES</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Campus Farm Locations</td>
<td>TBD</td>
<td>Various</td>
<td>Various</td>
</tr>
</tbody>
</table>

## SmartFarm Projects

A project has been initiated by faculty in the Department of Animal and Poultry Sciences in partnership with CALS IT and the Division of IT, to potentially install new technology, similar to Wi-Fi but with better exterior coverage and security management, in fields at Shenandoah Valley and Middleburg ARECs. The proposal is to study the effectiveness of this equipment for supporting data-intensive agricultural, animal-based research. Citizens Band Radio Service (CBRS) technology was investigated and deemed unsuitable for this project.

**Estimated Total Project Cost**

<table>
<thead>
<tr>
<th>Project</th>
<th>Estimated Total Project Cost</th>
<th>Fund Source</th>
<th>Project Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>SmartFarm Projects</td>
<td>TBD</td>
<td>TBD</td>
<td>TBD</td>
</tr>
</tbody>
</table>

## AREC Voice-Over Internet Protocol (VOIP) Conversion

Conversion of legacy voice telephone systems at all ARECs to a unified VOIP system matching voice service on campus.

**Estimated Total Project Cost**

<table>
<thead>
<tr>
<th>Project</th>
<th>Estimated Total Project Cost</th>
<th>Fund Source</th>
<th>Project Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>AREC Voice-Over Internet Protocol (VOIP) Conversion</td>
<td>$75,000</td>
<td>CALS / VAES</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Conversion of legacy voice telephone system at all ARECs to unified VOIP system matching voice service on campus.</td>
<td></td>
<td>Division of IT</td>
<td>Ongoing</td>
</tr>
</tbody>
</table>
**PROJECT INFORMATION**

- **Scope:** 67,876 GSF
- **Delivery method:** Construction Manager at Risk
- **Total project authorization:** $40 million
- **Design phase:** Working Drawings
- **Estimated construction start:** Summer 2021
- **Estimated construction completion:** Summer 2023

/ NEW UPPER QUAD RESIDENCE HALL
SITE PLAN

Portal and Accessible Route to Upper Quad

Existing ADA Parking

Future CLMS Building and Plaza

Major Williams Hall

NEW UPPER QUAD RESIDENCE HALL
That the Design Review graphics be approved, and authorization be provided to continue with the project design consistent with the drawings shown.
DESIGN REVIEW FOR NEW UPPER QUAD RESIDENCE HALL

Located in the Northeast and Upper Quad District on the corner of Stanger Street and Old Turner Street, the New Upper Quad Residence Hall (NUQRH) will serve to expand the housing capacity for Virginia Tech Corps of Cadets with the addition of 301 beds.

The 67,876 gross square feet, five-story facility will accommodate a mix of residential rooms and support spaces on the ground floor. The second through fourth floors are residential, and the fifth will be comprised of attic space and mechanical equipment. This project will occupy the current site of Femoyer Hall, an existing facility that will be demolished as a part of this facility’s construction. Adjacent to this project’s eastern edge is the site of another capital project, the Corps Leadership and Military Science Building (CLMS), which is anticipated to begin construction in summer 2021. These two projects will be constructed concurrently and managed by a single construction manager at risk. The NUQRH is currently in working drawings with construction start and substantial completion to be coordinated with the adjacent CLMS schedule.

The $40 million project includes debt service to be provided by Residential Programs revenue and includes the $7 million supplement approved by the Board of Visitors in November 2020. This project was first proposed as part of the 2018-2024 Capital Outlay Plan.
Capital Project Information Summary – New Upper Quad Residence Hall

BUILDINGS AND GROUNDS COMMITTEE

March 22, 2021

Title of Project:
New Upper Quad Residence Hall

Location:
Located in the Northeast and Upper Quad District, the site is to the immediate southeast of Stanger Street and Old Turner Street intersection in an area currently occupied by Femoyer Hall. A wing of the new facility will also occupy a section of open space north of the College of Liberal Arts and Human Sciences Building, fronting Major Williams Hall.

Current Project Status and Schedule:
The New Upper Quad Residence Hall (NUQRH) and Corps Leadership and Military Science (CLMS) projects will be constructed concurrently and managed by a single construction manager at risk. The NUQRH project is currently in working drawings with construction start and substantial completion to be coordinated with the adjacent CLMS schedule.

Project Description:
This NUQRH builds on the precinct planning initiated in 2012 to repurpose and improve this district through the construction of new facilities, open spaces, amenities and enhancements that reinforce the master plan vision and maintain a competitive edge for the Virginia Tech Corps of Cadets and Reserve Officer Training Corps (ROTC) programs. NUQRH is a five-story residence hall designed to fulfill increased housing capacity needs for the Corps of Cadets. The facility includes a mix of residential rooms and support spaces on the ground floor. The second through fourth floors are residential, and the fifth will be comprised of attic space and mechanical equipment. A portal, which serves as a dual-sided main entry and northern gateway to the Upper Quad, occurs where the building’s two wings intersect, and provides a much-needed accessible approach point into the district.

Brief Program Description:
This project will provide 301 additional beds for Virginia Tech Corps of Cadets as well as student support spaces, including a kitchen, laundry, and study areas. A limited number of offices and a classroom are also included on the main floor along with storage for Corps of Cadets programs.
Contextual Issues and Design Intent:
Existing facilities located on and adjacent to the project site increase the construction complexity and, along with existing roadways, compress the available construction area into an ‘urban’ condition. The design responds to these site conditions with an L-shaped plan organization. West and south edges of the project boundary have substantial changes in grade which will be made accessible through sloped walkways integrated with the building and landscape. The project’s north and west edges overlap with campus circulation pathway initiatives including the Infinite Loop and Turner Way. Architecturally, the design maintains the collegiate gothic expression of Upper Quad residential halls, clad in Hokie Stone and precast concrete, consistent with the Campus Design Principles.

Funding:
The $40 million project includes debt service to be provided by Residential Programs revenue and includes the $7 million supplement approved by the Board of Visitors in November 2020. This project was first proposed as part of the 2018-2024 Capital Outlay Plan.

Architect/Engineer:
Clark Nexsen, Inc.

Construction Manager at Risk:
James R. Vannoy & Sons Construction Company, Inc.
Future Agenda Items and Closing Remarks

BUILDINGS AND GROUNDS COMMITTEE

March 22, 2021

The Committee will discuss future agenda items and make closing remarks.
Open Joint Session Agenda

FINANCE AND RESOURCE MANAGEMENT COMMITTEE
AND BUILDINGS AND GROUNDS COMMITTEE

Latham A/B, The Inn at Virginia Tech

10:45 a.m.

March 22, 2021

Agenda Item Reporting Responsibility

* 1. Approval of the 2022 – 2028 Capital Outlay Plan Ken Miller
   Bob Broyden

2. Financial Considerations of the Virginia Tech 2020 Climate Action Commitment Dwayne Pinkney

* 3. Approval of the Virginia Tech 2020 Climate Action Commitment Dwayne Pinkney

* Requires full Board approval.
◆ Discusses Enterprise Risk Management topic(s).
Joint Open Session

1. Approval of the 2022-2028 Capital Outlay Plan: The Committees will review for approval the 2020-2028 Capital Outlay Plan. The university prepares an updated Six-Year Capital Outlay Plan every two years as part of its normal planning and budgeting cycle. The Plan is a critical component of positioning the university for state support of major Educational and General projects and for advancing high priority projects that may be funded entirely with nongeneral fund resources. The next state capital outlay plan will be for 2022-2028 and will be established in the 2022 budget development process. Traditionally, the state requires each institution to submit a capital plan in June of the year before a new biennium begins. Based on that timetable, a plan from the university for 2022-2028 will be due to the state in June of 2021.

Preliminary work has been done to identify potential projects for inclusion in the 2022-2028 Capital Outlay Plan in anticipation of future guidance and instructions from the state. These projects are consistent with programmatic needs established for the planning period and with the strategic plan of the university, and they position the university with options to respond to guidance from the state.

Since the submission date for the new Plan may occur before the June 2021 Board of Visitors meeting, the university is requesting the review and approval of the list of potential projects for inclusion in the 2022-2028 Capital Outlay Plan. The university will provide an update to the status of the 2022-2028 Plan at a future Board of Visitors meeting.

2. Financial Considerations of the Virginia Tech 2020 Climate Action Commitment: The Committees will receive a presentation on the financial considerations of the Virginia Tech 2020 Climate Action Commitment. A highly collaborative cross-divisional team worked to identify the financial impacts to achieve each prescribed pathway of the updated commitment. The team worked to analyze the economics and financial impacts of each initiative in depth and offer potential.

While detailed and comprehensive, the analysis is based on assumptions regarding technologies, costs, and policies for the future that are uncertain. Current developments and future projections in energy markets and in state and federal energy policy indicate that future values of those assumptions – while
uncertain now – may become more favorable for cost-effective implementation of the updated commitment. These evolving factors will be monitored and incorporated into five-year revisions in 2025 and 2030. In addition, the updated commitment requires an annual report of progress. That annual report will evaluate the assumptions and actual costs and/or savings of the commitment’s implementation. No specific funding decisions are to be made at this time. Funding requests will be incorporated into annual operating/capital budgeting processes. All financial needs compete for resources while considering tuition/fee constraints and university debt capacity.

* 3. **Resolution to Approve the Virginia Tech 2020 Climate Action Commitment:** The Committees will review for approval a resolution on the Virginia Tech 2020 Climate Action Commitment. Approved initially in 2009 by the Board of Visitors and revised in 2013, the Virginia Tech Climate Action Commitment serves as the university’s guiding framework around sustainability and energy efficiency in campus operations, facilities, curriculum, and research.

In late 2019, President Sands called for its renewal and revision to ensure the most stringent climate and sustainability standards are implemented as the university continues to grow and seeks to be a leader in environmental stewardship. The mission of the revised commitment is to achieve carbon neutrality by changing our physical infrastructure, collective and individual behaviors, and educational mission; to engage everyone in creating a culture of sustainability; and to achieve these objectives through just and equitable means.

A working group of faculty experts, governance representatives, students, operations professionals, and community members led this charge and crafted the revision. Through participation in working group and subcommittee meetings, brainstorming sessions, and community engagement events, students involved in the revision process had countless opportunities to gain practical sustainability experience. Senior vice president and chief business officer, Dwayne Pinkney, sponsored the initiative. The work group was chaired by John Randolph, professor emeritus of urban affairs and planning, and co-chaired by Todd Schenk, assistant professor of urban affairs and planning and member of the Commission on Faculty Affairs.

On an aggressive timeline, the revision moved through university governance this fall, receiving approval from the Energy and Sustainability Committee, Commission on University Support, and the University Council. It was endorsed by the Faculty and Staff Senates, the Student Government Association, and the Graduate Student Assembly. The Board received a preview of the updated Climate Action Commitment at its November 2020 meeting.

* Requires full Board approval.

♦ Discusses Enterprise Risk Management topic(s).
Capital Outlay Plan for 2022-2028

JOINT FINANCE AND RESOURCE MANAGEMENT COMMITTEE
AND BUILDINGS AND GROUNDS COMMITTEE

February 26, 2021

Background:

The university prepares an updated Six-Year Capital Outlay Plan (Plan) every two years as part of its normal planning and budgeting processes. The Plan is a critical component of positioning the university for state support of Educational and General capital projects and for advancing high priority projects that may be funded entirely with nongeneral fund resources. The next state capital outlay plan will be for the 2022-2028 period and will be established in the 2022 budget session of the General Assembly. Traditionally, the state requires each institution to submit a capital plan in June of the year before a new biennium begins. Based on that timetable, a plan from the university for 2022-2028 will be due to the state in June of 2021. At this time, the state has not yet provided instructions or specific guidance for the development of a plan.

In preparation for the 2022-2028 Plan submission to the state, the Campus Planning and Capital Financing unit coordinates a process to develop a listing of high priority projects for the planning period. The process includes the following major phases:

1. Identify a comprehensive list of space and facility needs, (shown in Appendix 1);
2. Develop potential solutions for each need;
3. Filter out solutions that do not meet the capital project threshold, must be referred for further programming and operating plan development, and/or logistically exceed the six-year planning period;
4. Consolidate the list of solutions for duplication and package the solutions into capital projects;
5. Organize the list of projects into a subset for General Fund requests that must be submitted to the state for budget consideration and a subset for entirely nongeneral fund projects that may be authorized by the Board of Visitors;
6. Rank the General Fund list in priority order for funding based on strategic impact and funding potential; and
7. Review the list internally with university leadership for presentation to the Board of Visitors.

The prioritized rankings of General Fund projects for both the University Division and the Cooperative Extension/Agricultural Experiment Stations (CE/AES) agencies of Virginia Tech are shown in Attachment A, and projects that call for entirely nongeneral fund support are listed in Attachment B.
General Fund Requests, Attachment A:

The highest priority projects requesting General Fund resources are listed under each division of Virginia Tech in their priority order, which reflects the strategic priorities of Virginia Tech and state priorities as understood at this time. The total dollar value of the list exceeds projected resources likely to be allocated to Virginia Tech during the planning period. By including a variety of high priority needs in the listing, the university ensures it has the flexibility to adapt to various state capital funding programs that may emerge over the upcoming 12 months.

The state requires that an institution’s Board of Visitors review and approve projects prior to submission in the state budget process. Because the submission date to the state may occur before the June 2021 Board of Visitors meeting, the university is seeking the review and approval of the list of potential projects for inclusion in its submission to the state, shown in Attachment A. When guidance and instructions are received from the state, the university will prepare and submit its capital budget items based upon the projects included in Attachment A. If future instructions and/or guidance from the state necessitate a change in the rankings or arrangement of projects in the General Fund listing, a final list with adjustments as submitted to the state will be brought to the Board of Visitors for review and ratification at a subsequent meeting.

Nongeneral Fund Projects, Attachment B:

Attachment B lists the highest priority projects that call for entirely nongeneral fund resources in their budget and that are reasonably expected to be implemented by 2028. This section covers the auxiliary enterprise system projects and other projects requesting some combination of private support, returned overhead dollars, external construction grants, and/or nongeneral fund debt to fund the total costs, including capital leases.

Under the university’s Management Agreement with the state for Capital Projects, the Board of Visitors has the authority to approve and implement projects supported 100 percent by nongeneral funds. Each project follows a three-step approval process by the Board of Visitors and those that require external debt require a fourth approval step. The steps include 1) inclusion in the approved Six-Year Capital Outlay Plan, 2) authorization for planning to produce design documents to validate the project’s feasibility, 3) authorization for construction when funding is available and sufficient, and 4) approval of external debt required for any capital project prior to issuance.

Auxiliary enterprise projects with a financing plan that calls for an increase of student fees depend on Board of Visitors approval of the rates as part of the Tuition and Fee package. Projects with a financing plan that calls for private gifts depend on the successful completion of donation commitments and cash receipts.

Project Costs:

The projects costs shown on the Plan reflect total project cost estimates based on campus historical experience, industry trends, benchmarking of unit costs for program descriptions, and scope of the proposed facilities. The estimates reflect costs escalated to a mid-point of construction three years out.
Debt Financing:
Projects with nongeneral fund support, including portions of some gift campaigns, may use external debt to finance a portion of the project. Each potential debt financing undergoes an internal financial feasibility assessment to ensure resources are sufficient to cover the full debt service term without unnecessary financial risk to the unit’s operations.

The positioning of debt is further analyzed to ensure the university does not exceed the parameters of the university debt policy or debt management practices, which sets a maximum limit of a five percent ratio of total annual debt service to total operating expenses. This evaluation is projected six-years out and includes anticipated issuances for projects in the Plan. The Board of Visitors reviews and approves an annual report of debt capacity and debt ratio and authorizes individual debt packages prior to an issuance. These practices provide an important set of controls to ensure the institution’s debt obligations do not become a point of inflexibility in reaching the operational goals of the institution, to ensure the university is holding sufficient debt capacity for its highest priorities, and to ensure compliance with restructuring requirements for credit ratings and debt ratios.

Division of Student Affairs Capital Improvement Program:
During this Six-Year Plan update cycle, the Division of Student Affairs introduced a novel concept for exploration. The proposal calls for exploring an opportunity to repurpose the funding authorized for certain projects to establish phase one of a new student life district that would be phased over time to include residential, dining, recreation, and student commons spaces. A key feature of the concept is for the new village to be accessible to campus and to follow a design standard and building delivery system that controls costs. The funding plan for this proposal calls for the consolidation of funding for the Global Business and Analytics Complex Residence Hall, Slusher Hall Replacement, and the dining program’s food processing facility. The university’s next steps call for further internal programming, master planning, and operating planning to develop a full-blown implementation plan for the student life district concept. The university will provide updates on the progress of this concept at future Board of Visitors meetings.

RECOMMENDATION:
That the Capital Outlay Plan for 2022-2028 as shown in Attachments A and B, be approved and for the university to submit the items in Attachment A in the state’s capital budget process in accordance with future instructions and guidance from the state.

March 22, 2021
## University Division

<table>
<thead>
<tr>
<th>Project Description</th>
<th>General Fund</th>
<th>Nongeneral Fund</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>1 Randolph Hall Replacement</td>
<td>$208,800</td>
<td>$23,200</td>
<td>$232,000</td>
</tr>
<tr>
<td>2 Hahn Hall Renovation and Expansion</td>
<td>$71,700</td>
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<td>$99,700</td>
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<tr>
<td>3 Academic Renewal Package</td>
<td>$80,000</td>
<td>-</td>
<td>$80,000</td>
</tr>
<tr>
<td>Renovate Media Building</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Advising and Academic Services Center</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classroom Renovations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music / Theater Program Space</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Lane Hall Renovation</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4 Robeson Hall Renovation</td>
<td>$37,000</td>
<td>$7,300</td>
<td>$44,300</td>
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<tr>
<td>5 Newman Library Renovation</td>
<td>$70,300</td>
<td>-</td>
<td>$70,300</td>
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<tr>
<td>6 Derring Hall Renovation</td>
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<td>$101,600</td>
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<tr>
<td>7 Life, Health, Safety, Code Compliance Package</td>
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## Cooperative Extension / Agriculture Experiment Station Division (CE/AES)

<table>
<thead>
<tr>
<th>Project Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1 Improve Research Facilities</td>
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<td>-</td>
<td>$26,900</td>
</tr>
<tr>
<td>Center Woods Complex Improvements</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>System-wide Agricultural Research and Extension Centers Improvements, Phase I</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Replace Animal Based Facilities at Glade Road</td>
<td>$26,300</td>
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<td>$26,300</td>
</tr>
<tr>
<td>3 Construct Animal Production and Livestock Facilities, Phase II</td>
<td>$27,100</td>
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<td>$27,100</td>
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<td>4 Construct Plant and Environmental Sciences Research Facility (HABB-II)</td>
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## Total General Fund Capital Plan for 2022-2028

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### Nongeneral Fund Six-Year Capital Outlay Plan for 2022-2028

**as of February 26, 2021**

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<tr>
<td>Gilbert Street Building (long-term lease)</td>
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<td>Hitt Hall - Academic Component</td>
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<td>Research Swing Space (long-term lease)</td>
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<tr>
<td></td>
<td>-</td>
<td>217,800</td>
<td>217,800</td>
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<tr>
<td><strong>Blacksburg Auxiliaries</strong></td>
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<tr>
<td>Food Processing Center and Warehouse</td>
<td>-</td>
<td>10,000</td>
<td>10,000</td>
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<td>Hitt Hall -- New Dining Center</td>
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<td>43,000</td>
<td>43,000</td>
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<td>Tennis Center Improvements</td>
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<td></td>
<td>-</td>
<td>57,000</td>
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<tr>
<td><strong>Greater Washington D.C., Metro Area</strong></td>
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<tr>
<td>Ballston: Renovate Research Space</td>
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<td>5,000</td>
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<tr>
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<td><strong>GRAND TOTAL SIX-YEAR CAPITAL OUTLAY PLAN</strong></td>
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<td>$345,900</td>
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</table>
General Fund Projects – Attachment A:

University Division

1. Randolph Hall Replacement
Randolph Hall was constructed in 1952 with an addition in 1959, and no major renovations since construction was completed. This project envisions razing and replacing the entire 166,000 GSF existing building and constructing a new 284,000 GSF building at the same site. The funding plan for this project includes $23.2 million of private gifts.

2. Hahn Hall Renovation and Expansion
Hahn Hall was constructed in 1988 with an addition in 2002, and no major renovations since construction was completed. The proposed project includes renovating the entire 71,100 GSF existing building and expanding with a 53,000 GSF addition to provide space for instructional classrooms, laboratory space, and support space for the physics and chemistry programs.

3. Academic Renewal Package
This project packages together several small and medium sized high priority facility renewal items.

- Renovate Media Building: This subproject will renovate the entire 13,200 square foot Media Building located in the Creativity and Innovation District to provide updated spaces for art programs.

- Student Advising and Academic Services Center: This subproject will renovate the entire 24,500 GSF of the G. Burke Johnson Student Center to repurpose it for the consolidation of Undergraduate Academic Affairs and Degree and Enrollment Management functions.

- Classroom Renovations: This subproject will renovate approximately 56,250 GSF of outdated and underutilized general assignment classroom space to meet the existing space demand and to support planned enrollment growth.
• Music / Theater Program Space: The subproject relocates the music and theater programs from Squires Student Center to a new approximately 85,800 GSF facility in the Creativity and Innovation District. This is a critical precursor to vacating Squires Student Center to move forward other major projects in the Creativity and Innovation District.

• Lane Hall Renovation: Originally known as Barracks No. 1, Lane Hall was built in 1888 and converted to office use in 1967. This subproject is for the renovation and preservation of the 26,580 GSF historic building to house academic programs.

4. Robeson Hall Renovation
Robeson Hall was constructed in 1960 with no major improvements or renovations since construction was completed. The project includes renovating the 66,000 GSF existing building to provide modern laboratories and support space to meet the needs for instructional classrooms and laboratory space for the physics and materials sciences programs.

5. Newman Library Renovation
Newman Library was constructed in 1955 with an addition in 1980, with no major renovations since construction was completed. This project envisions constructing a new library storage facility off-campus followed by a renovation of the entire Newman Library to address student demand for a high-quality library environment with up-to-date interactive learning formats.

6. Derring Hall Renovation
Derring Hall was constructed in 1969 with only one major improvement via renovation since the original construction was completed. This request is to renovate and modernize this high demand instructional building for physical sciences programs.

7. Life, Health, Safety, Code Compliance Package
The university’s health, safety, and accessibility initiative for the campus is an ongoing effort, and the university includes a request for this program in each capital plan. This project continues progress on needed campus improvements including accessibility improvements and life safety repairs that are beyond the scope of the Maintenance Reserve program.
Cooperative Extension / Agricultural Experiment Station Division

1. Improve Research Facilities
   - Center Woods Complex Improvements: This project proposes 25,900 gross square feet (GSF) of improvements to the Center Woods Complex for the Fisheries and Wildlife program, located off Plantation Road.
   - System-wide Agricultural Research and Extension Centers Improvements, Phase I: This project will address the top priority infrastructure and renovation needs for Agricultural Research and Extension Centers across the state. This phase of the project includes approximately 50,660 GSF of space for the programmatic needs.

2. Replace Animal Based Facilities at Glade Road
   This project relocates agricultural and animal-based assets from the Glade Road area to better long-term locations near the College of Agriculture and Life Sciences and the Virginia-Maryland College of Veterinary Medicine facilities. The project includes multiple new construction projects that contain approximately 64,200 GSF as well as the demolition of outdated assets.

3. Construct Animal Production and Livestock Facilities, Phase II
   This project completes the two-part effort to systematically replace approximately 228,200 GSF of animal-based facilities that have exceeded their useful life. The state appropriated a phase one project to address 126,000 GSF of improvements. This phase two project includes approximately 102,600 GSF of renewed animal and multi-use facilities primarily serving beef cattle, equine, sheep, and poultry research. The replacement facilities consolidate functions and operational efficiencies.

4. Construct Plant and Environmental Sciences Research Facility (HABB-II)
   This project is to provide a second 94,000 GSF modern research space that will focus on plant sciences within the Agricultural Experiment Station including research laboratories, laboratory support space, research offices, faculty offices, and graduate student research space.

*Nongeneral Fund Projects – Attachment B:*

**Blacksburg Academic**

**Gilbert Street Building (long-term lease)**

The Virginia Tech Foundation is constructing a new facility adjacent to the North End Center. This building will provide space for retail operators on the ground level with the upper floors dedicated to university programs. The university will enter a long-term lease agreement with the Foundation.
Hitt Hall – Academic Component

Hitt Hall includes approximately 55,000 gross square feet (GSF) of space for instruction and laboratory space, as well as faculty, staff, and graduate student work space for the growing School of Construction. The new building will be located in the northwest area of campus near Bishop-Favrao Hall and the new Classroom Building. The overall funding plan for this project includes $25 million of private gifts.

New Building for Pamplin College of Business

The project includes approximately 104,000 GSF of new construction to house the Pamplin College of Business. The proposed building will provide the college expanded, modern instructional space sufficient to meet demand for interactive learning including a variety of general purpose and specialized classrooms, learning laboratories, and seminar rooms. The funding plan for this project includes $40.4 million of private gifts.

Research Swing Space (long-term lease)

The Corporate Research Center is constructing an approximately 68,000 GSF facility configured for research functions. The space is necessary to provide swing space capacity to renovate high priority academic buildings.

Veterinary Teaching Hospital Expansion

The project includes approximately 16,300 GSF of renovation and 25,300 GSF of new construction at the veterinary hospital to provide space for program expansion and enrollment growth. The funding plan for this project includes $7 million of private gifts.

Blacksburg Auxiliaries

Food Processing Center and Warehouse

This project is for a new 45,000 GSF food processing center and warehouse to provide Dining Services with modern space for central food preparation, bakeshop, and cold storage to meet the growing demands of campus dining centers.

Hitt Hall – New Dining Center

The new dining hall will be co-located with the Hitt Hall academic program and will be located in the northwest area of campus near Bishop-Favrao Hall and the new Classroom Building.

Tennis Center Improvements

This project will renovate the existing tennis facilities to include expanded locker rooms, team lounges, medical training support, and fan viewing areas. The funding plan for this project includes $4 million of private gifts.
Greater Washington D.C., Metro Area

Ballston: Renovate Research Space

This approximately 20,000 rentable square foot renovation will reconfigure existing space to better serve the university’s long-term goals for the Ballston area including research to address topics related to national and homeland security.
Purpose

The Plan is the university’s key instrument for positioning the university for state support and aligning internal resources to advance priority projects that may be funded entirely with nongeneral funds.
A. Senior Managers update unit needs and provide updates to support Team -- complete
B. Team reviews, sorts, and organizes needs based on strategic criteria -- complete
C. Executive Space Committee review and priority setting -- complete
D. President’s review and priority setting -- complete
E. Board of Visitors review and approval, March 22, 2021 -- pending
F. Submission to the state, June 2021 -- pending
G. Executive Budget Bill, December 2021 -- pending
Key criteria to select projects for inclusion on the Plan and to set/adjust priorities

• Impact on the University Strategic Plan
• Senior manager’s priority ranking
• Alignment with State’s strategic initiatives
• Consistency with the Campus Master Plan
• Potential for nongeneral fund support
• Facility condition and continuity of service delivery
• Funding and debt capacity, both state and university
• Proposals that address multiple program needs
• Logistics and critical path timing to reach project
Key points about the Plan

1) Focus on infrastructure to support the strategic plan
2) Aligns with the state on capital priorities
3) Provides a variety of projects to fit various state funding opportunities
4) Broad representation across the organization and programs
5) Focus on rehabilitation and modernization of campus assets
Resolution for the Six Year Capital Plan 2022-2028 Update

RECOMMENDATION:

That the Capital Outlay Plan for 2022-2028, shown in Attachments A and B, be approved and for the university to submit the items in Attachment A in the state’s capital budget process in accordance with future instructions and guidance from the state.

MARCH 22, 2021
FINANCIAL CONSIDERATIONS
OF THE
VIRGINIA TECH 2020 CLIMATE
ACTION COMMITMENT

PREPARED FOR THE BOARD OF VISITORS

MARCH 22, 2021
FINANCIAL CONSIDERATIONS OF THE VIRGINIA TECH 2020 CLIMATE ACTION COMMITMENT

1 / VT 2020 CAC REVIEW

2 / INTEGRATED FINANCIAL ANALYSIS

3 / RENEWABLE ENERGY EMERGED AS THE PATHWAY WITH MOST VARIABILITY

4 / DETAILED COST ANALYSIS BASED ON RENEWABLE ENERGY SCENARIOS
In the spirit of Ut Prosim, Virginia Tech will be a leader in climate action in service to our community, the Commonwealth, and the world. To achieve carbon neutrality by changing our physical infrastructure, collective and individual behaviors, and educational mission; to engage everyone in creating a culture of sustainability; and to achieve these objectives through just and equitable means.
1. Carbon neutral Virginia Tech campus by 2030
2. 100% renewable electricity by 2030
3. Complete the total conversion of steam plant fuel to natural gas by 2025, plan for a full transition to renewable steam plant fuel after 2025, and continue to improve efficiency of campus energy systems
4. Reduce building energy consumption to enable carbon neutrality by 2030
5. Operations of new buildings initiated after 2030 will be carbon neutral
6. Agricultural, forestry, land use operations will be carbon neutral by 2030
7. Virginia Tech to become a Zero-Waste Campus by 2030
8. Establish sustainable procurement policies and procedures by 2022
9. Reduce single-occupancy commutes to campus by 20% by 2025, and reduce transportation-related GHG emissions by 40% by 2030
10. Integrate the Virginia Tech 2020 Climate Action Commitment into the university’s educational mission through a new Climate Action Living Laboratory in 2021
11. Establish climate justice as one of the core values of the VT Climate Action Commitment
12. Diminish barriers to sustainable behaviors and through institutional change, education, and social marketing
13. Implement the VT Climate Action Commitment …at a high level of university administration and governance; …by integrating CAC goals for facilities, education, and campus culture; …with ongoing stakeholder engagement for evaluation of goals and progress
14. Develop innovative budgeting and financing mechanisms to generate funding and staffing to achieve Climate Action Commitment goals
15. Develop Pathways to eliminate offsets and fossil fuels by 2050
Carbon neutral goal is common, but Virginia Tech is unique to include Scope 3

*Greenhouse Gas Scope Definitions
1. Direct emissions
2. Emissions from purchased electricity
3. Indirect emissions (e.g., related to water, wastes, commuting, business travel)

100% renewable electricity is not as common a goal but many universities are adding renewables (mostly by PPA)

### Carbon Neutral Campus: 105 Institutions by 2030 or Sooner
(secondnature.org pledges)

<table>
<thead>
<tr>
<th>Institution</th>
<th>Carbon Neutral Date</th>
<th>GHG Scope*</th>
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<tbody>
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<td><strong>Virginia Tech</strong></td>
<td>2030</td>
<td>1, 2, 3 (behavioral)</td>
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<td>University of Virginia</td>
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<td>1, 2</td>
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<tr>
<td>The College of William &amp; Mary</td>
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<td>?</td>
</tr>
<tr>
<td>University of North Carolina, Chapel Hill</td>
<td>2030</td>
<td>1, 2</td>
</tr>
<tr>
<td>Duke University</td>
<td>2024</td>
<td>1, 2</td>
</tr>
<tr>
<td>Clemson University</td>
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<td>?</td>
</tr>
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</table>

### Renewable Electricity: >33 Institutions
(go100renewablecampus.org)

<table>
<thead>
<tr>
<th>Institution</th>
<th>100% Renewable Electricity Date</th>
<th>Major Projects</th>
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</thead>
<tbody>
<tr>
<td><strong>Virginia Tech</strong></td>
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<td>University of Virginia</td>
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<tr>
<td>The College of William &amp; Mary</td>
<td>N/A</td>
<td>20 MW PPA (Dom. Energy)</td>
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<tr>
<td>Duke University</td>
<td>N/A</td>
<td>110 MW PPA (3rd Party)</td>
</tr>
</tbody>
</table>
Energy efficiency
Renewable energy
Transition to natural gas
Zero waste campus management
Transform mobility & transportation
Climate action living laboratory
Motivate behavioral changes

One-time costs
Annual recurring costs (including staff)
Savings generated by one-time and annual cost investments
Net cost analysis (long-term NPV)
Greenhouse gas (GHG) impacts
• **GOAL 2**: 100% renewable electricity by 2030
• This goal emerged as the pathway with **most variability**
• As such, the options for *Goal 2* became the basis for the model’s **four scenarios**
All Goal 2 solar projects are provided by PPA (power purchase agreement)

**HYBRID I**
2.35 MW on-site solar project owned and all other Goal 2 solar projects provided by PPA

**HYBRID II**
15MW of on-site projects owned and the large off-site project provided through PPA

**ALL PPA**
All Goal 2 solar projects are provided by PPA

**ALL OWN**
All Goal 2 solar projects are owned by the university
All Goal 2 solar projects are provided by PPA

2.35 MW on-site solar project owned and all other Goal 2 solar projects provided by PPA

15MW of on-site projects owned and the large off-site project provided through PPA

All Goal 2 solar projects are owned by the university
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<tr>
<th>Project</th>
<th>Related Goal</th>
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<th>Hybrid II</th>
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<td>Lighting</td>
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## ANNUAL OPERATING COST ANALYSIS

**Costs: $ in millions**

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<th>Related Goal</th>
<th>All PPA</th>
<th>Hybrid I</th>
<th>Hybrid II</th>
<th>All Owned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Expenses</td>
<td>Multiple</td>
<td>$1.6</td>
<td>$1.6</td>
<td>$1.7</td>
<td>$2.0</td>
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<tr>
<td>Owned Solar O&amp;M</td>
<td>2</td>
<td>0</td>
<td>0.03</td>
<td>0.11</td>
<td>0.42</td>
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<tr>
<td>LNG Facility Lease Costs</td>
<td>3</td>
<td>0.95</td>
<td>0.95</td>
<td>0.95</td>
<td>0.95</td>
</tr>
<tr>
<td>Retro-Commissioning Flex Labor</td>
<td>4</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
</tr>
<tr>
<td>Net Zero Building Fund</td>
<td>5</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
</tr>
<tr>
<td>Forest Management</td>
<td>6</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
</tr>
<tr>
<td>Kentland Compost Facility</td>
<td>6, 7</td>
<td>0.17</td>
<td>0.17</td>
<td>0.17</td>
<td>0.17</td>
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<tr>
<td>Staffing</td>
<td>All</td>
<td>1.8</td>
<td>1.8</td>
<td>1.8</td>
<td>1.8</td>
</tr>
<tr>
<td>Principal &amp; Interest Payments</td>
<td>2, 3, 4, 7</td>
<td>0.10</td>
<td>0.44</td>
<td>1.8</td>
<td>9.9</td>
</tr>
<tr>
<td>REC &amp; Carbon Offset Credits</td>
<td>1, 2</td>
<td>1.1</td>
<td>1.1</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Sub-Total</td>
<td>Multiple</td>
<td>4.6</td>
<td>4.9</td>
<td>6.4</td>
<td>14.8</td>
</tr>
<tr>
<td>Savings</td>
<td></td>
<td>(9.4)</td>
<td>(9.7)</td>
<td>(10.9)</td>
<td>(16.0)</td>
</tr>
<tr>
<td><strong>Net Cost/(Savings)</strong></td>
<td></td>
<td>($4.8)</td>
<td>($4.8)</td>
<td>($4.5)</td>
<td>($1.2)</td>
</tr>
</tbody>
</table>

FY2031 Projections
**BENEFITS OF ‘HYBRID’ SOLAR OPTIONS**

**BALANCED PORTFOLIO**
- Leverages the Virginia Tech Electric Service (VTES) as the unique university resource that it is
- Enhances VTES reliability and resiliency given a diverse and balanced portfolio of power sources
- Supplements VTES portfolio and provides valuable renewable energy experience

**TEACHING & RESEARCH OPPORTUNITIES**
- Promotes smart grid research
- Enhances competitiveness for research grants for renewable energy and grids of the future
- Promotes ongoing research in solar PV project efficiencies and effectiveness
- Provides a living laboratory for students/faculty by integrating campus projects into the curriculum and training for new generation workforce
- Provides visible showcase of CAC on campus and community

**TECHNOLOGICALLY ADAPTABLE**
- Aligns with the Commonwealth of Virginia’s strategy to develop its clean energy economy over the coming decades — technologies and energy finance will evolve and change
- Provides valuable experience to inform future decisions and to adapt to changing energy technologies, markets, and policies
All Goal 2 solar projects are provided by PPA (power purchase agreement)

2.35 MW on-site solar project owned and all other Goal 2 solar projects provided by PPA

15MW of on-site projects owned and the large off-site project provided through PPA

All Goal 2 solar projects are owned by the university
<table>
<thead>
<tr>
<th>Goal 2 Scenario</th>
<th>Capital &amp; One-time Costs</th>
<th>FY31 Annual Gross Costs</th>
<th>FY31 Annual Gross (Savings)</th>
<th>NPV to FY50 Cost (Savings)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All PPA</td>
<td>$37.0 M</td>
<td>$4.6 M</td>
<td>($9.4 M)</td>
<td>($26.3 M)</td>
</tr>
<tr>
<td>Hybrid I</td>
<td>$42.4 M</td>
<td>$4.9 M</td>
<td>($9.7 M)</td>
<td>($24.8 M)</td>
</tr>
<tr>
<td>Hybrid II</td>
<td>$64.2 M</td>
<td>$6.4 M</td>
<td>($10.9 M)</td>
<td>($20.2 M)</td>
</tr>
<tr>
<td>All Own</td>
<td>$190.7 M</td>
<td>$14.8 M</td>
<td>($16.0 M)</td>
<td>$19.9 M</td>
</tr>
</tbody>
</table>

**Capital & One-time Costs**: required for the purchase of equipment and other assets for all CAC goals; major costs amortized over 20 years

**Annual Gross Costs**: in FY31 following implementation of all CAC initiatives subject to escalation across future years; including principal and Interest (P&I) for major capital projects

**Annual Gross Savings**: In FY31 annual savings generated through all CAC energy and initiatives that reduce existing (pre-CAC) costs

**Net Costs NPV**: the net impact of all CAC Costs and Savings over a 30-year analysis period (through FY50)
<table>
<thead>
<tr>
<th>GHG Goal</th>
<th>Related Goal</th>
<th>GHG Reduction FY31</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas Offset Credits</td>
<td>1</td>
<td>66,099</td>
<td>30.4%</td>
</tr>
<tr>
<td>Scope 3 Offset Credits</td>
<td>1</td>
<td>43,907</td>
<td>20.2%</td>
</tr>
<tr>
<td>On-Site Rooftop Solar</td>
<td>2</td>
<td>1,274</td>
<td>0.6%</td>
</tr>
<tr>
<td>On-Site Ground Mount Solar</td>
<td>2</td>
<td>7,029</td>
<td>3.2%</td>
</tr>
<tr>
<td>Off-Site Large-Scale Solar*</td>
<td>2</td>
<td>56,129</td>
<td>25.8%</td>
</tr>
<tr>
<td>APCO RPS RECs</td>
<td>2</td>
<td>2,834</td>
<td>1.3%</td>
</tr>
<tr>
<td>Balancing RECs</td>
<td>2</td>
<td>17,061</td>
<td>7.8%</td>
</tr>
<tr>
<td>Steam Plant Backup LNG</td>
<td>3</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Chiller Improvements</td>
<td>3</td>
<td>2,345</td>
<td>1.1%</td>
</tr>
<tr>
<td>Energy Efficiency Projects</td>
<td>4</td>
<td>20,759</td>
<td>9.5%</td>
</tr>
<tr>
<td>Lighting</td>
<td>4</td>
<td>7,303</td>
<td>3.4%</td>
</tr>
<tr>
<td>Retro-Commissioning</td>
<td>4</td>
<td>7,265</td>
<td>3.3%</td>
</tr>
<tr>
<td>Green RFPs</td>
<td>4</td>
<td>693</td>
<td>0.3%</td>
</tr>
<tr>
<td>Other ECMs</td>
<td>4</td>
<td>5,497</td>
<td>2.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>217,437</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Greenhouse Gas reduction over the analysis term = 4,335,889 MTCO2e

*GHG from transmission and distribution losses are not included.
• No specific funding decisions to be made at this time
• Funding requests will be incorporated into annual operating/capital budgeting processes
• All financial needs compete for resources while considering tuition/fee constraints and university debt capacity
• CAC utility savings will increase resource capacity to assist CAC pathways
• Pursue innovative financing (Goal 14) to achieve goals, such as:
  • State/federal/foundation grants, sponsored research projects
  • Advancement donor funds, VT Foundation partnership
  • Repurposing existing budgets/staff
  • Maximize utility/provider (e.g., PJM) incentive programs
• Represent CAC in Strategic Plan Dashboard
• Reevaluation of the CAC and financial considerations in response to changing conditions will occur annually and in five-year updates in 2025 and 2030
# 2010-2019 Expenditures to Advance the University that also Supported 2009 CAC

- 17 LEED Certified Buildings 2010-2020
- Perry Street Garage Solar Project (0.1 MW) 2011 $1M
- Central Steam Plant Natural Gas Pipeline 2015
- Central Steam Plant Boiler No. 12 2019 $8.5M
- Central Chiller Upgrade 2019 $41M
- Alternative Transportation Programs 2010-2019 $17M
- Recycling and Waste Management Programs 2010-2019 $9M
- New Sustainability Academic Programs 2010-2019
- Student Initiated Green RFP Program 2010-2019 $1M

# 2021-2030 Expenditures to Advance the University that also Support 2020 CAC

**Non-CAC Planned Projects Benefiting 2020 CAC**

- 10-year Energy Management Program 2021-2030 $3M/year = $30M
- Energy Management Staffing 2022-2030 $2M
- LEED Certified Buildings 2021-2030
- Stand-alone Chiller Upgrade 2021-2030 $2M
- University Compost Facility at Kentland Farm 2024 $2M
- Recycling and Waste Management Programs 2021-2030 $4M
- Student Initiated Green RFP Program 2021-2030
- Sterrett Solar Project (0.3 MW) 2022 $1M
- Master Plan Projects/Studies: Transportation, Fleet, Utilities

**New CAC Initiatives**

- Campus Solar Projects (2.0 MW) 2022, $5M
- Central Steam Plant Backup LNG Project 2024-2031 $5M
- Climate Action Living Laboratory 2021-2030 $4M
- Climate Action Leadership Staffing 2021-2030 $4M

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**Key Takeaways**

- Investments to advance the university have supported the 2009 CAC and will continue to support 2020 CAC
- All investments on right included in analysis showing $25M NPV savings to 2050
DETAILED SCENARIOS
All Goal 2 solar projects are provided by PPA (power purchase agreement)

**HYBRID I**
2.35 MW on-site solar project owned and all other Goal 2 solar projects provided by PPA

**HYBRID II**
15MW of on-site projects owned and the large off-site project provided through PPA

**ALL PPA**
All Goal 2 solar projects are provided by PPA (power purchase agreement)

**ALL OWN**
All Goal 2 solar projects are owned by the university
OPTION: ALL PPA
### Total CAC Financial Summary – All PPA and All Other Goals

<table>
<thead>
<tr>
<th>Solar Scenario</th>
<th>Capital Cost (1x)</th>
<th>FY31 Annual Gross Cost</th>
<th>FY31 Annual Gross (Savings)</th>
<th>NPV to FY50 Cost (Savings)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal 2: All PPA</td>
<td>$0.0 M</td>
<td>$0.2M</td>
<td>($2.1 M)</td>
<td>($25.1 M)</td>
</tr>
<tr>
<td>All Other Goals</td>
<td>$37.0 M</td>
<td>$4.4 M</td>
<td>($7.3 M)</td>
<td>($1.2 M)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$37.0 M</strong></td>
<td><strong>$4.6 M</strong></td>
<td><strong>($9.4 M)</strong></td>
<td><strong>($26.3 M)</strong></td>
</tr>
</tbody>
</table>

**Capital & One-time Project Costs** – required for the purchase of equipment and other assets for all CAC goals; major costs amortized over 20 years

**Annual Costs** – in FY31 following implementation of all CAC initiatives subject to escalation across future years; including principal and Interest (P&I) for major capital projects

**Annual Gross Savings** – In FY31 annual savings generated through all CAC energy and initiatives that reduce existing (pre-CAC) costs

**Net Costs NPV** – the net impact of all CAC Costs and Savings over the 30-year analysis (through FY50) term using a 4% discount rate

---

**ALL PPA**

Scenario where all Goal 2 solar projects are provided by PPA
### Expected One-Time Costs

<table>
<thead>
<tr>
<th>Project</th>
<th>Related Goal</th>
<th>One-Time Cost Estimate</th>
<th>Fiscal Year Incurred</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Site Rooftop Solar</td>
<td>2</td>
<td>$0</td>
<td>FY21</td>
</tr>
<tr>
<td>On-Site Ground Mount Solar</td>
<td>2</td>
<td>0</td>
<td>FY27</td>
</tr>
<tr>
<td>Off-Site Large-Scale Solar</td>
<td>2</td>
<td>0</td>
<td>FY31</td>
</tr>
<tr>
<td>Steam Plant Backup LNG</td>
<td>3</td>
<td>1.0</td>
<td>FY22</td>
</tr>
<tr>
<td>Chiller Improvements</td>
<td>3</td>
<td>2.0</td>
<td>FY22 – FY30</td>
</tr>
<tr>
<td>Energy Efficiency Projects</td>
<td>4</td>
<td>27</td>
<td>FY22 – FY31</td>
</tr>
<tr>
<td>Lighting</td>
<td>4</td>
<td>16</td>
<td>FY22 – FY31</td>
</tr>
<tr>
<td>Retro-Commissioning</td>
<td>4</td>
<td>1.1</td>
<td>FY21 – FY23</td>
</tr>
<tr>
<td>Green RFPs</td>
<td>4</td>
<td>2.1</td>
<td>FY21 – FY31</td>
</tr>
<tr>
<td>Other ECMs</td>
<td>4</td>
<td>8.1</td>
<td>FY21 – FY30</td>
</tr>
<tr>
<td>Kentland Compost Facility</td>
<td>6,7</td>
<td>1.9</td>
<td>FY24-FY 25</td>
</tr>
<tr>
<td>Funding of Innovation Projects</td>
<td>10</td>
<td>0.20</td>
<td>FY24</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td></td>
<td><strong>$32</strong></td>
<td></td>
</tr>
<tr>
<td>15% Contingency</td>
<td></td>
<td><strong>$4.8</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$37.0</strong></td>
<td></td>
</tr>
</tbody>
</table>
## Annual Operating Cost

<table>
<thead>
<tr>
<th>Annual Recurring Cost</th>
<th>Related Goal</th>
<th>FY31 Cost Estimate</th>
<th>Fiscal Year Start</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Expenses</td>
<td>Multiple</td>
<td>$1.6</td>
<td>FY21 – FY31</td>
</tr>
<tr>
<td>Owned Solar O&amp;M</td>
<td>2</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td>LNG Facility Lease Costs</td>
<td>3</td>
<td>0.95</td>
<td>FY22</td>
</tr>
<tr>
<td>Retro-Commissioning Flex Labor</td>
<td>4</td>
<td>0.19</td>
<td>FY21</td>
</tr>
<tr>
<td>Net Zero Building Fund</td>
<td>5</td>
<td>0.25</td>
<td>FY31</td>
</tr>
<tr>
<td>Forest Management</td>
<td>6</td>
<td>0.03</td>
<td>FY26</td>
</tr>
<tr>
<td>Kentland Compost Facility</td>
<td>6,7</td>
<td>0.17</td>
<td>FY25</td>
</tr>
<tr>
<td>Staffing</td>
<td>All</td>
<td>1.8</td>
<td>FY21 – FY24</td>
</tr>
<tr>
<td>Interest &amp; Principal Payments</td>
<td>2, 3, 4, 7</td>
<td>0.10</td>
<td>FY21 – FY27</td>
</tr>
<tr>
<td>RECs &amp; Offset Credits</td>
<td>1, 2</td>
<td>1.1</td>
<td>FY21</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td></td>
<td><strong>$4.6</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Projected Annual Recurring Cost

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Annual Costs ($/Yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY20</td>
<td>0.00</td>
</tr>
<tr>
<td>FY21</td>
<td>0.10</td>
</tr>
<tr>
<td>FY22</td>
<td>0.20</td>
</tr>
<tr>
<td>FY23</td>
<td>0.30</td>
</tr>
<tr>
<td>FY24</td>
<td>0.40</td>
</tr>
<tr>
<td>FY25</td>
<td>0.50</td>
</tr>
<tr>
<td>FY26</td>
<td>0.60</td>
</tr>
<tr>
<td>FY27</td>
<td>0.70</td>
</tr>
<tr>
<td>FY28</td>
<td>0.80</td>
</tr>
<tr>
<td>FY29</td>
<td>0.90</td>
</tr>
<tr>
<td>FY30</td>
<td>1.00</td>
</tr>
<tr>
<td>FY31</td>
<td>1.10</td>
</tr>
</tbody>
</table>

- **Operating Expenses**
- **Staffing Expenses**
- **Interest Payments**
- **RECs & Offset Credits**
## Annual Gross Savings

<table>
<thead>
<tr>
<th>Annual Gross Savings</th>
<th>Related Goal</th>
<th>FY31 Savings Estimate</th>
<th>Fiscal Year Start</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Site Rooftop Solar</td>
<td>2</td>
<td>$0.05</td>
<td>FY21</td>
</tr>
<tr>
<td>On-Site Ground Mount Solar</td>
<td>2</td>
<td>0.57</td>
<td>FY27</td>
</tr>
<tr>
<td>Off-Site Large-Scale Solar</td>
<td>2</td>
<td>1.5</td>
<td>FY31</td>
</tr>
<tr>
<td>Steam Plant Backup LNG</td>
<td>3</td>
<td>0.37</td>
<td>FY22</td>
</tr>
<tr>
<td>Chiller Improvements</td>
<td>3</td>
<td>0.87</td>
<td>FY22</td>
</tr>
<tr>
<td>Energy Efficiency Projects</td>
<td>4</td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td>Lighting</td>
<td>4</td>
<td>3.1</td>
<td>FY22</td>
</tr>
<tr>
<td>Retro-Commissioning</td>
<td>4</td>
<td>1.5</td>
<td>FY21</td>
</tr>
<tr>
<td>Green RFPs</td>
<td>4</td>
<td>0.22</td>
<td>FY21</td>
</tr>
<tr>
<td>Other ECMs</td>
<td>4</td>
<td>1.3</td>
<td>FY21</td>
</tr>
</tbody>
</table>

**Total** $9.4

$ in millions

### Projected Annual Gross Savings

![Projected Annual Gross Savings Graph](image)

- **Goal 2**
- **Goal 3**
- **Goal 4**

**FY20**

**FY21**

**FY22**

**FY23**

**FY24**

**FY25**

**FY26**

**FY27**

**FY28**

**FY29**

**FY30**

**FY31**
OPTION: HYBRID I
## OPTION: HYBRID I

**HYBRID I**

Goal 2 scenario with the 2.35 MW on-site solar project owned and all other solar projects provided by PPA

### Total CAC Financial Summary – Hybrid I and All Other Goals

<table>
<thead>
<tr>
<th>Solar Scenario</th>
<th>Capital Cost (1x)</th>
<th>FY31 Annual Gross Cost</th>
<th>FY31 Annual Gross (Savings)</th>
<th>NPV to FY50 Cost (Savings)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal 2: Hybrid I</td>
<td>$5.4 M</td>
<td>$0.5 M</td>
<td>($2.4 M)</td>
<td>($23.6 M)</td>
</tr>
<tr>
<td>All Other Goals</td>
<td>$37.0 M</td>
<td>$4.4 M</td>
<td>($7.3 M)</td>
<td>($1.2 M)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$42.4 M</strong></td>
<td><strong>$4.9 M</strong></td>
<td><strong>($9.7 M)</strong></td>
<td><strong>($24.8 M)</strong></td>
</tr>
</tbody>
</table>

**Capital & One-time Project Costs** – required for the purchase of equipment and other assets for all CAC goals; major costs amortized over 20 years

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## CAPITAL & ONE-TIME COST

**$ in millions**

<table>
<thead>
<tr>
<th>Project</th>
<th>Related Goal</th>
<th>Capital Cost Estimate</th>
<th>Fiscal Year Incurred</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Site Rooftop Solar</td>
<td>2</td>
<td>$4.7</td>
<td>FY22</td>
</tr>
<tr>
<td>On-Site Ground Mount Solar</td>
<td>2</td>
<td>0</td>
<td>FY27</td>
</tr>
<tr>
<td>Off-Site Large-Scale Solar</td>
<td>2</td>
<td>0</td>
<td>FY31</td>
</tr>
<tr>
<td>Steam Plant Backup LNG</td>
<td>3</td>
<td>1.0</td>
<td>FY22</td>
</tr>
<tr>
<td>Chiller Improvements</td>
<td>3</td>
<td>2.0</td>
<td>FY22 – FY30</td>
</tr>
<tr>
<td>Energy Efficiency Projects</td>
<td>4</td>
<td>27</td>
<td>FY22 – FY31</td>
</tr>
<tr>
<td>Lighting</td>
<td>4</td>
<td>15</td>
<td>FY22 – FY31</td>
</tr>
<tr>
<td>Retro-Commissioning</td>
<td>4</td>
<td>1.1</td>
<td>FY21 – FY23</td>
</tr>
<tr>
<td>Green RFPs</td>
<td>4</td>
<td>2.1</td>
<td>FY21 – FY31</td>
</tr>
<tr>
<td>Other ECMs</td>
<td>4</td>
<td>8.2</td>
<td>FY21 – FY30</td>
</tr>
<tr>
<td>Kentland Compost Facility</td>
<td>6, 7</td>
<td>1.9</td>
<td>FY24 - FY25</td>
</tr>
<tr>
<td>Funding of Innovation Projects</td>
<td>10</td>
<td>0.20</td>
<td>FY24</td>
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</tbody>
</table>

**Sub-Total** $36.8

**15% Contingency** $5.6

**Total** $42.4

### Expected Capital Costs

![Expected Capital Costs Chart](chart.png)

Legend:
- Blue: Goal 2
- Orange: Goal 3
- Gray: Goal 4
- Green: Goal 7
- Black: Goal 10

<table>
<thead>
<tr>
<th>Year</th>
<th>Goal 2</th>
<th>Goal 3</th>
<th>Goal 4</th>
<th>Goal 7</th>
<th>Goal 10</th>
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<td></td>
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</table>
# Annual Operating Cost

## Annual Recurring Cost

<table>
<thead>
<tr>
<th>Annual Recurring Cost</th>
<th>Related Goal</th>
<th>FY31 Cost Estimate</th>
<th>Fiscal Year Start</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Expenses</td>
<td>Multiple</td>
<td>$1.6</td>
<td>FY21 – FY31</td>
</tr>
<tr>
<td>Owned Solar O&amp;M</td>
<td>2</td>
<td>0.03</td>
<td>FY23</td>
</tr>
<tr>
<td>LNG Facility Lease Costs</td>
<td>3</td>
<td>0.95</td>
<td>FY22</td>
</tr>
<tr>
<td>Retro-Commissioning Flex Labor</td>
<td>4</td>
<td>0.19</td>
<td>FY21</td>
</tr>
<tr>
<td>Net Zero Building Fund</td>
<td>5</td>
<td>0.25</td>
<td>FY31</td>
</tr>
<tr>
<td>Forest Management</td>
<td>6</td>
<td>0.03</td>
<td>FY26</td>
</tr>
<tr>
<td>Kentland Compost Facility</td>
<td>6, 7</td>
<td>0.17</td>
<td>FY25</td>
</tr>
<tr>
<td>Staffing</td>
<td>All</td>
<td>1.8</td>
<td>FY21 – FY24</td>
</tr>
<tr>
<td>Principal &amp; Interest Payments</td>
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<td>RECs &amp; Carbon Offset Credits</td>
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<td>FY21</td>
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</table>

**Sub-Total** $4.9

$ in millions

## Projected Annual Recurring Cost

![Projected Annual Recurring Cost Chart](chart.png)
### ANNUAL GROSS SAVINGS

<table>
<thead>
<tr>
<th>Annual Gross Savings</th>
<th>Related Goal</th>
<th>FY31 Savings Estimate</th>
<th>Fiscal Year Start</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Site Rooftop Solar</td>
<td>2</td>
<td>$0.31</td>
<td>FY21</td>
</tr>
<tr>
<td>On-Site Ground Mount Solar</td>
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<tr>
<td>Off-Site Large-Scale Solar</td>
<td>2</td>
<td>1.5</td>
<td>FY31</td>
</tr>
<tr>
<td>Steam Plant Backup LNG</td>
<td>3</td>
<td>0.37</td>
<td>FY22</td>
</tr>
<tr>
<td>Chiller Improvements</td>
<td>3</td>
<td>0.87</td>
<td>FY22</td>
</tr>
<tr>
<td>Energy Efficiency Projects</td>
<td>4</td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td><strong>Lighting</strong></td>
<td><strong>4</strong></td>
<td><strong>3.1</strong></td>
<td><strong>FY22</strong></td>
</tr>
<tr>
<td><strong>Retro-Commissioning</strong></td>
<td><strong>4</strong></td>
<td><strong>1.5</strong></td>
<td><strong>FY21</strong></td>
</tr>
<tr>
<td><strong>Green RFPs</strong></td>
<td><strong>4</strong></td>
<td><strong>0.22</strong></td>
<td><strong>FY21</strong></td>
</tr>
<tr>
<td><strong>Other ECMs</strong></td>
<td><strong>4</strong></td>
<td><strong>1.3</strong></td>
<td><strong>FY21</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$9.7</strong></td>
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</table>

### Projected Annual Gross Savings

![Projected Annual Gross Savings](chart.png)

- **Goal 2**: Blue
- **Goal 3**: Grey
- **Goal 4**: Yellow
OPTION: HYBRID II
**OPTION: HYBRID II**

**HYBRID II**
Goal 2 scenario with 15MW of on-site projects owned and the large off-site project provided through a PPA

<table>
<thead>
<tr>
<th>Solar Scenario</th>
<th>Capital Cost (1x)</th>
<th>FY31 Annual Gross Cost</th>
<th>FY31 Annual Gross (Savings)</th>
<th>NPV to FY50 Cost (Savings)</th>
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</thead>
<tbody>
<tr>
<td>Goal 2: Hybrid II</td>
<td>$27.2 M</td>
<td>$2.0 M</td>
<td>($3.5 M)</td>
<td>($19.0 M)</td>
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<tr>
<td>All Other Goals</td>
<td>$37.0 M</td>
<td>$4.4 M</td>
<td>($7.4 M)</td>
<td>($1.2 M)</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$64.2 M</strong></td>
<td><strong>$6.4 M</strong></td>
<td><strong>($10.9 M)</strong></td>
<td><strong>($20.2 M)</strong></td>
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</tbody>
</table>

**Capital & One-time Project Costs** – required for the purchase of equipment and other assets for all CAC goals; major costs amortized over 20 years

**Annual Costs** – in FY31 following implementation of all CAC initiatives subject to escalation across future years; including principal and Interest (P&I) for major capital projects

**Annual Gross Savings** – In FY31 annual savings generated through all CAC energy and initiatives that reduce existing (pre-CAC) costs

**Net Costs NPV** – the net impact of all CAC Costs and Savings over the 30-year analysis (through FY50) term using a 4% discount rate
### CAPITAL & ONE-TIME COST

<table>
<thead>
<tr>
<th>Project</th>
<th>Related Goal</th>
<th>One-Time Cost Estimate</th>
<th>Fiscal Year Incurred</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Site Rooftop Solar</td>
<td>2</td>
<td>$4.7</td>
<td>FY21</td>
</tr>
<tr>
<td>On-Site Ground Mount Solar</td>
<td>2</td>
<td>19</td>
<td>FY27</td>
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<tr>
<td>Off-Site Large-Scale Solar</td>
<td>2</td>
<td>0</td>
<td>FY31</td>
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<tr>
<td>Steam Plant Backup LNG</td>
<td>3</td>
<td>1.0</td>
<td>FY22</td>
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<tr>
<td>Chiller Improvements</td>
<td>3</td>
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<td>FY22 – FY30</td>
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<tr>
<td>Energy Efficiency Projects</td>
<td>4</td>
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<td>FY22 – FY31</td>
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<td>Lighting</td>
<td>4</td>
<td>16</td>
<td>FY22 – FY31</td>
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<tr>
<td>Retro-Commissioning</td>
<td>4</td>
<td>1.1</td>
<td>FY21 – FY23</td>
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<tr>
<td>Green RFPs</td>
<td>4</td>
<td>2.1</td>
<td>FY21 – FY31</td>
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<tr>
<td>Other ECMs</td>
<td>4</td>
<td>8.2</td>
<td>FY21 – FY30</td>
</tr>
<tr>
<td>Kentland Compost Facility</td>
<td>6,7</td>
<td>1.9</td>
<td>FY24--FY25</td>
</tr>
<tr>
<td>Funding of Innovation Projects</td>
<td>10</td>
<td>0.20</td>
<td>FY24</td>
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<tr>
<td><strong>Sub-Total</strong></td>
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<td><strong>15% Contingency</strong></td>
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<tr>
<td><strong>Total</strong></td>
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<td><strong>$64.2</strong></td>
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</table>

#### Expected One-Time Costs

![Graph showing expected one-time costs](image-url)
<table>
<thead>
<tr>
<th>Annual Recurring Cost</th>
<th>Related Goal</th>
<th>FY31 Cost Estimate</th>
<th>Fiscal Year Start</th>
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<td>Operating Expenses</td>
<td>Multiple</td>
<td>$1.7</td>
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<td>Owned Solar O&amp;M</td>
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<td>0.95</td>
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<tr>
<td>Retro-Commissioning Flex Labor</td>
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<tr>
<td>Net Zero Building Fund</td>
<td>5</td>
<td>0.25</td>
<td>FY31</td>
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<tr>
<td>Forest Management</td>
<td>6</td>
<td>0.03</td>
<td>FY26</td>
</tr>
<tr>
<td>Kentland Compost Facility</td>
<td>6, 7</td>
<td>0.17</td>
<td>FY25</td>
</tr>
<tr>
<td>Staffing</td>
<td>All</td>
<td>1.8</td>
<td>FY21 – FY24</td>
</tr>
<tr>
<td>Interest &amp; Principal Payments</td>
<td>2, 3, 4, 7</td>
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<td>FY21 – FY27</td>
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<tr>
<td>RECs &amp; Offset Credits</td>
<td>1, 2</td>
<td>1.1</td>
<td>FY21</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td></td>
<td><strong>$6.4</strong></td>
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### Projected Annual Recurring Cost

<table>
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<tr>
<th>Annual Costs ($/Yr)</th>
<th>FY20</th>
<th>FY21</th>
<th>FY22</th>
<th>FY23</th>
<th>FY24</th>
<th>FY25</th>
<th>FY26</th>
<th>FY27</th>
<th>FY28</th>
<th>FY29</th>
<th>FY30</th>
<th>FY31</th>
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</thead>
<tbody>
<tr>
<td>Operating Expenses</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
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<tr>
<td>Staffing Expenses</td>
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<td>1.8</td>
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<td>1.8</td>
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<td>0.2</td>
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</tr>
</tbody>
</table>
### ANNUAL GROSS SAVINGS

#### $ in millions

<table>
<thead>
<tr>
<th>Annual Gross Savings</th>
<th>Related Goal</th>
<th>FY31 Savings Estimate</th>
<th>Fiscal Year Start</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Site Rooftop Solar</td>
<td>2</td>
<td>$0.31</td>
<td>FY21</td>
</tr>
<tr>
<td>On-Site Ground Mount Solar</td>
<td>2</td>
<td>1.7</td>
<td>FY27</td>
</tr>
<tr>
<td>Off-Site Large-Scale Solar</td>
<td>2</td>
<td>1.5</td>
<td>FY31</td>
</tr>
<tr>
<td>Steam Plant Backup LNG</td>
<td>3</td>
<td>0.37</td>
<td>FY22</td>
</tr>
<tr>
<td>Chiller Improvements</td>
<td>3</td>
<td>0.87</td>
<td>FY22</td>
</tr>
<tr>
<td><strong>Energy Efficiency Projects</strong></td>
<td>4</td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td>Lighting</td>
<td>4</td>
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<td>Retro-Commissioning</td>
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<td>Green RFPS</td>
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<td>FY21</td>
</tr>
<tr>
<td><strong>Other ECMs</strong></td>
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<td>1.3</td>
<td>FY21</td>
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<tr>
<td><strong>Total</strong></td>
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<td><strong>$10.9</strong></td>
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</tbody>
</table>

#### Projected Annual Gross Savings

![Graph showing projected annual gross savings from FY20 to FY31]
OPTION:
ALL OWN
### Total CAC Financial Summary – All Own and All Other Goals

<table>
<thead>
<tr>
<th>Solar Scenario</th>
<th>Capital Cost (1x)</th>
<th>FY31 Annual Gross Cost</th>
<th>FY31 Annual Gross (Savings)</th>
<th>NPV to FY50 Cost (Savings)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal 2: All Own</td>
<td>$153.7 M</td>
<td>$10.4 M</td>
<td>($8.7 M)</td>
<td>$21.0 M</td>
</tr>
<tr>
<td>All Other Goals</td>
<td>$37.0 M</td>
<td>$4.4 M</td>
<td>($7.3 M)</td>
<td>($1.2 M)</td>
</tr>
<tr>
<td>Total</td>
<td>$190.7 M</td>
<td>$14.8 M</td>
<td>($16.0 M)</td>
<td>$19.9 M</td>
</tr>
</tbody>
</table>

**Capital & One-time Project Costs** – required for the purchase of equipment and other assets for all CAC goals; major costs amortized over 20 years

**Annual Costs** – in FY31 following implementation of all CAC initiatives subject to escalation across future years; including principal and Interest (P&I) for major capital projects

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<table>
<thead>
<tr>
<th>Project</th>
<th>Related Goal</th>
<th>One-Time Cost Estimate</th>
<th>Fiscal Year Incurred</th>
</tr>
</thead>
<tbody>
<tr>
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<td>$4.7</td>
<td>FY21</td>
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<td>On-Site Ground Mount Solar</td>
<td>2</td>
<td>19</td>
<td>FY27</td>
</tr>
<tr>
<td>Off-Site Large-Scale Solar</td>
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<td>110</td>
<td>FY31</td>
</tr>
<tr>
<td>Steam Plant Backup LNG</td>
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<tr>
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<td>2.0</td>
<td>FY22 – FY30</td>
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<td>1.1</td>
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<tr>
<td>Kentland Compost Facility</td>
<td>6,7</td>
<td>1.9</td>
<td>FY24-FY25</td>
</tr>
<tr>
<td>Funding of Innovation Projects</td>
<td>10</td>
<td>0.20</td>
<td>FY24</td>
</tr>
</tbody>
</table>

Sub-Total $166

15% Contingency $25

Total $190.7

**Expected One-Time Costs**

- **Goal 2**
- **Goal 3**
- **Goal 4**
- **Goal 7**
- **Goal 10**

$ in millions
### Annual Operating Cost

<table>
<thead>
<tr>
<th>Annual Recurring Cost</th>
<th>Related Goal</th>
<th>FY31 Cost Estimate</th>
<th>Fiscal Year Start</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Expenses</td>
<td>Multiple</td>
<td>$2.0</td>
<td>FY21 – FY31</td>
</tr>
<tr>
<td><strong>Owned Solar O&amp;M</strong></td>
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<td>FY23, FY27, FY31</td>
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<tr>
<td>LNG Facility Lease Costs</td>
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<td>FY22</td>
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<tr>
<td>Retro-Commissioning Flex Labor</td>
<td>4</td>
<td>0.19</td>
<td>FY21</td>
</tr>
<tr>
<td>Net Zero Building Fund</td>
<td>5</td>
<td>0.25</td>
<td>FY31</td>
</tr>
<tr>
<td>Forest Management</td>
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<td>0.03</td>
<td>FY26</td>
</tr>
<tr>
<td>Kentland Compost Facility</td>
<td>6, 7</td>
<td>0.17</td>
<td>FY25</td>
</tr>
<tr>
<td>Staffing</td>
<td>All</td>
<td>1.8</td>
<td>FY21 – FY24</td>
</tr>
<tr>
<td>Interest &amp; Principal Payments</td>
<td>2, 3, 4, 7</td>
<td>9.9</td>
<td>FY21 – FY27</td>
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<td>RECs &amp; Offset Credits</td>
<td>1, 2</td>
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<tr>
<td><strong>Sub-Total</strong></td>
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</table>

**Projected Annual Recurring Cost**

- Operating Expenses
- Staffing Expenses
- Interest Payments
- RECs & Offset Credits

**Annual Costs ($/Yr)**

- FY20
- FY21
- FY22
- FY23
- FY24
- FY25
- FY26
- FY27
- FY28
- FY29
- FY30
- FY31

**Sub-Total ($ in millions): $14.8**
## Annual Gross Savings

<table>
<thead>
<tr>
<th>Annual Gross Savings</th>
<th>Related Goal</th>
<th>FY31 Savings Estimate</th>
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<tbody>
<tr>
<td>On-Site Rooftop Solar</td>
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<td>On-Site Ground Mount Solar</td>
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<td>Off-Site Large-Scale Solar</td>
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<td>Steam Plant Backup LNG</td>
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<tr>
<td>Lighting</td>
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<td>Other ECMs</td>
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<tr>
<td><strong>Total</strong></td>
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$ in millions

Projected Annual Gross Savings

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<tr>
<th>Gross Savings ($/Yr)</th>
<th>FY20</th>
<th>FY21</th>
<th>FY22</th>
<th>FY23</th>
<th>FY24</th>
<th>FY25</th>
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<td>Goal 3</td>
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</table>

ALL OWN
RESOLUTION TO APPROVE THE
VIRGINIA TECH 2020 CLIMATE ACTION COMMITMENT

WHEREAS, Virginia Tech recognizes that sustainability is an integral part of the fabric of the university as it pursues enhanced economic stability and affordability, diversity and inclusion, environmental stewardship, expansion of knowledge, and education of future leaders; and

WHEREAS, Virginia Tech has long been recognized as a leader in campus sustainability, with the highest scores for the Association for the Advancement of Sustainability in Higher Education (AASHE) Sustainability Tracking, Assessment, and Rating System (STARS) for institutions in the Commonwealth of Virginia and the Atlantic Coast Conference, numerous Governor’s Environmental Excellence Awards, prominent standing in Princeton Review’s top 50 Green Colleges, and many other accolades; and

WHEREAS, the 2009 Virginia Tech Climate Action Commitment and Sustainability Plan, as revised in 2013, was a cutting-edge effort for its time, but now fails to prescribe what climate scientists recognize as necessary actions and also falls short of many peer universities’ recent initiatives; and

WHEREAS, the campus community has pushed for more aggressive climate action as represented by demands of student environmental organizations and resolutions by the Faculty Senate and Staff Senate, the Student Government Association, and the Graduate Student Assembly; and

WHEREAS, Virginia Tech President Timothy D. Sands stated in November 2019 that “climate change presents one of the world’s most pressing problems… and Virginia Tech has a duty to respond,” and called for a new working group to evaluate the university’s progress in climate action and to update its climate action commitment; and

WHEREAS, a 26-member Virginia Tech Climate Action Commitment Working Group met weekly for six months from January through June 2020; led 12 subcommittees involving 125 faculty, staff, student, and community participants; and engaged hundreds of university community members in online surveys and virtual convening sessions, to produce a comprehensive evaluation of progress and develop a new Virginia Tech 2020 Climate Action Commitment; and

WHEREAS, the Virginia Tech 2020 Climate Action Commitment contains an aggressive yet pragmatic set of 15 goals – and pathways to achieve those goals – that involve necessary upgrades to the campus physical infrastructure and operations to reduce greenhouse gas emissions (GHG), integrate these improvements into the university’s educational and research mission, engage everyone to enhance the campus culture of sustainability, and consider these
actions’ financial, environmental, reputational, and social equity impacts and benefits; and

WHEREAS, the Virginia Tech 2020 Climate Action Commitment sets the stage for Virginia Tech to shine as an exemplar and leader in higher education climate action by not only aiming to become a carbon neutral and zero-waste campus by 2030, but also utilizing the university’s unique Virginia Tech Electric Service to partner and develop a way to 100 percent renewable electricity by 2030; using considerable land resources to manage agricultural impacts, sequester carbon, and develop renewable energy; accounting for behavior-related GHG emissions from waste and transport; integrating climate action into education; and specifically addressing community engagement, sustainable behaviors, and social equity; and

WHEREAS, in developing innovative budgeting and financing mechanisms to achieve the Virginia Tech 2020 Climate Action Commitment goals, the university shall recognize that all financial needs compete for resources, consider the impact on tuition and fee constraints as well as university debt capacity, and incorporate funding requests into established annual operating and/or capital budgeting processes as appropriate;

NOW, THEREFORE, BE IT RESOLVED, that the Virginia Tech Board of Visitors approve the Virginia Tech 2020 Climate Action Commitment, including the following vision and mission statements, and 15 goals:

**Vision** of the Virginia Tech 2020 Climate Action Commitment:

*In the spirit of Ut Prosim, Virginia Tech will be a leader in climate action in service to our community, the Commonwealth, and the world.*

**Mission** of the Virginia Tech 2020 Climate Action Commitment:

*The mission of the Virginia Tech 2020 Climate Action Commitment is to achieve carbon neutrality by changing our physical infrastructure, collective and individual behaviors, and educational mission; to engage everyone in creating a culture of sustainability; and to achieve these objectives through just and equitable means.*

**The Virginia Tech 2020 Climate Action Commitment Goals**

1. Carbon neutral Virginia Tech campus by 2030
2. 100 percent renewable electricity by 2030
3. Complete the total conversion of steam plant fuel to natural gas by 2025, plan for a full transition to renewable steam plant fuel after 2025, and continue to improve the efficiency of campus energy systems
4. Reduce building energy consumption to enable carbon neutrality by 2030
5. Operations of new buildings initiated by 2030 will be carbon neutral
6. Agricultural, forestry, and land use operations will be carbon neutral by 2030
7. Virginia Tech to become a Zero-Waste Campus by 2030
8. Establish sustainable procurement policy and procedures by 2022
9. Reduce single-occupancy-vehicle commuting to campus by 20 percent by 2025 and reduce transportation-related GHG emissions by 40 percent by 2030
10. Integrate the Virginia Tech 2020 Climate Action Commitment into the university’s educational mission through a new Climate Action Living Laboratory beginning in 2021
11. Establish climate justice as a core value of the Virginia Tech 2020 Climate Action Commitment
12. Diminish barriers to sustainable behaviors through institutional change, education and social marketing
13. Implement the Virginia Tech 2020 Climate Action Commitment at a high level of university administration and governance; by integrating goals for facilities, education, and campus culture; and with stakeholder engagement in the ongoing evaluation of goals and progress
14. Develop innovative budgeting and financing mechanisms to generate funding and staffing to achieve the Virginia Tech 2020 Climate Action Commitment goals
15. Develop pathways after 2030 to eliminate fossil fuels and carbon offsets by 2050

**Recommendation:**

That the Virginia Tech 2020 Climate Action Commitment be approved.

March 22, 2021
APPROVAL
OF THE
VIRGINIA TECH 2020 CLIMATE
ACTION COMMITMENT

PREPARED FOR THE BOARD OF VISITORS

MARCH 22, 2021
In the spirit of Ut Prosim, Virginia Tech will be a leader in climate action in service to our community, the Commonwealth, and the world.

Mission

... achieve carbon neutrality by changing our physical infrastructure, collective and individual behaviors, and educational mission; to engage everyone in creating a culture of sustainability; and to achieve these objectives through just and equitable means.
1. Carbon neutral Virginia Tech campus by 2030
2. 100% renewable electricity by 2030
3. Complete the total conversion of steam plant fuel to natural gas by 2025, plan for a full transition to renewable steam plant fuel after 2025, and continue to improve efficiency of campus energy systems
4. Reduce building energy consumption to enable carbon neutrality by 2030
5. Operations of new buildings initiated after 2030 will be carbon neutral
6. Agricultural, forestry, land use operations will be carbon neutral by 2030
7. Virginia Tech to become a Zero-Waste Campus by 2030
8. Establish sustainable procurement policies and procedures by 2022
9. Reduce single-occupancy commutes to campus by 20% by 2025, and reduce transportation-related GHG emissions by 40% by 2030
10. Integrate the Virginia Tech 2020 Climate Action Commitment into the university’s educational mission through a new Climate Action Living Laboratory in 2021
11. Establish climate justice as one of the core values of the VT Climate Action Commitment
12. Diminish barriers to sustainable behaviors and through institutional change, education, and social marketing
13. Implement the VT Climate Action Commitment … at a high level of university administration and governance; … by integrating CAC goals for facilities, education, and campus culture; … with ongoing stakeholder engagement for evaluation of goals and progress
14. Develop innovative budgeting and financing mechanisms to generate funding and staffing to achieve Climate Action Commitment goals
15. Develop Pathways to eliminate offsets and fossil fuels by 2050
Recommendation:
That the Virginia Tech 2020 Climate Action Commitment be approved.
EXECUTIVE SUMMARY

From January to June 2020, the Virginia Tech Climate Action Commitment Working Group executed its charge to evaluate the university’s current position and future role in addressing climate change.

This summary report and the much longer full 2020 Virginia Tech Climate Action Commitment Working Group Report, Subcommittee Reports, and associated appendices provide a clear road map for not only how Virginia Tech can do its part to address climate change, but also become a leader in taking bold action to combat this worldwide crisis.

Throughout 2020, a global pandemic brought unprecedented hardship and suffering, particularly for the most vulnerable among us. In this public health crisis, citizens are learning an important lesson: when experts are near unanimous in ringing the alarm bells on looming crises, society must take decisive action.

This unique time is engendering a tremendous spirit of innovation and collaboration that is highly applicable to the Climate Action Commitment revision process.

In late 2019 – prompted by the demands of students and other community members involved in climate strikes and resolutions from the Faculty and Staff Senates, Student Government Association, and Graduate Student Assembly – President Tim Sands and Senior Vice President and Chief Business Officer Dwayne Pinkney established a Climate Action Commitment Working Group comprised of 26 faculty, students, staff, and community members. In announcing the creation of the Working Group, President Sands stated that “climate change presents one of the world’s most pressing problems…and Virginia Tech has a duty to respond.”

The Working Group was charged to assess the university’s progress in implementing the 2009/2013 Virginia Tech Climate Action Commitment, compare our experience to peer institutions, and develop a new commitment. Virginia Tech, like other universities, is facing both short-term fiscal challenges and long-term uncertainties in these challenging times. Nonetheless, the university remains committed to taking bold action to do its part to address the climate emergency.

Please read on to learn more about the 2020 Virginia Tech Climate Action Commitment. The full Working Group Report and other pertinent documents and information may be found at svpoa.vt.edu/index/VTCACRevision. Chapter references that follow are applicable to the full report.
WORKING GROUP PROCESS

In order to engage a broad range of expertise and perspectives from across the university and wider community and conduct an ambitious work program, the Working Group established 12 subcommittees including a total of 130 faculty, students, community members, and staff to investigate and discuss specific issues relevant to the commitment. Most of the subcommittees met weekly from early February through the end of May. The subcommittees included:

- Agriculture, Forestry, and Land Use
- Budget and Finance
- Buildings Opportunities
- Climate Justice
- Community Engagement
- Energy Opportunities
- Greenhouse Gas (GHG) Inventory
- Peer Institutions Comparison
- Renewables Opportunities
- Structuring Sustainable Choices
- Transportation Opportunities
- Waste-Recycling-Composting and Procurement

The Working Group developed several mechanisms to expand community involvement in the process, including a website and email address for comment and two online surveys. Plans for face-to-face town hall meetings and conference sessions had to be reimagined when the university shut down after spring break. In place of the in-person events, the Working Group hosted 12 Zoom Convening sessions in April, attended by over 220 participants who provided excellent feedback. In anticipation of these Convening sessions, the Working Group and its subcommittees also developed ten creative videos that describe the Climate Action Commitment proposals. Learn more about campus community engagement in the process and access videos at svpoa.vt.edu/index/VTCACRevision.

The Working Group’s efforts have focused on developing effective strategies the university can advance to achieve meaningful climate action. Throughout the multitude of Working Group, subcommittee, and community Zoom meetings, discussions have also reflected on the important opportunity for Virginia Tech to reinvent itself, not only in its commitment to climate action, but also in its responsiveness to the needs of the world around us, in the spirit of Ut Prosim.

The recommended Climate Action Commitment is bold, aggressive, and comprehensive. Its goals range from necessary upgrades to the campus physical plant to reduce GHG emissions, to integrating those improvements into the educational mission through a Climate Action Living Laboratory, to engaging everyone in creating a culture of sustainability—all to position Virginia Tech as a leader as the clean energy economy evolves in the Commonwealth and the world.

PROGRESS IMPLEMENTING 2009 VIRGINIA TECH CLIMATE ACTION COMMITMENT

Virginia Tech has made considerable progress in implementing its 2009/2013 Climate Action Commitment (2009 Virginia Tech Climate Action Commitment) over the past decade. The 2009 Virginia Tech Climate Action Commitment and Sustainability Plan was a cutting-edge effort for its time, but a decade later it fails to prescribe what climate scientists recognize as necessary actions and also falls short of many peer universities’ recent initiatives.

In many respects, however, Virginia Tech has been forging ahead beyond the 2009/2013 Climate Action Commitment. Virginia Tech is a recognized leader in campus sustainability with a Sustainability Tracking and Rating System (STARS) Gold score that is highest among Virginia and ACC peer institutions. Virginia Tech has won numerous awards and recognitions since 2010, including Princeton Review’s top 50 Green Colleges (#14 in 2019), the Governor’s Environmental Excellence Award (7 times), Best Workplaces for Commuters (every year, gold in 2019-20), Bicycle Friendly Campus (every year, silver level in 2019), Tree Campus USA certification (every year), and many others.

The university has reduced greenhouse gas (GHG) emissions by 24 percent from 2006-19, despite 22 percent growth in campus building size and enrollment. This reduction is faster than the 2009 Climate Action Commitment targeted trajectory. It resulted from investments in energy efficiency in existing and new buildings, and most importantly, from replacing coal with natural gas in the steam plant, which was enabled by a new gas pipeline. Virginia Tech now has 36 LEED-certified buildings constructed or in process, amounting to 30 percent of campus space, and in 2015-20 the university invested $14 million in energy efficiency improvements, resulting in energy and dollar savings with a 5-year payback.

Virginia Tech has done much to develop alternative transportation choices, including dual use trails, bike share, ride share, and car share programs. The university has had record ridership on its partner Blacksburg Transit and innovative plans for campus mobility. Virginia Tech has a functional, although fragmented, waste management program with an 80 percent waste diversion rate (waste diverted from landfill) and 40 percent recycling rate, although shy of the 50 percent by 2020 goal of the 2013 Virginia Tech Climate Action Commitment. In April 2020, the Procurement Department unveiled a Sustainable Procurement Policy; and in May, the Facilities Department produced new Design and Construction Building Standards, both reflecting the ideals of the Virginia Tech Climate Action Commitment.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry, and Land Use</td>
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<tr>
<td>Budget and Finance</td>
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<td>Buildings Opportunities</td>
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<td>Climate Justice</td>
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<tr>
<td>Waste-Recycling-Composting and Procurement</td>
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The university has an enviable array of sustainability-related academic programs, majors, coursework, and research, in green engineering, natural resources, agriculture, power and energy systems, environmental policy, and smart and sustainable cities. In the STARS rating system, Virginia Tech scores 89 percent of possible points in academic categories. It also scores 95 percent of possible points in campus engagement. Virginia Tech has a rich campus life for students with a wide array of opportunities, including strong environmental student organizations. Indeed, these student groups have energized the university community to move forward on climate action, both in 2008 and in 2019. The Division of Campus Planning, Infrastructure, and Facilities has embraced sustainability and climate action as part of its mission, and the Office of Sustainability is second to none, even with limited staff. The university has the highly unique and valuable Virginia Tech Electric Service (VTES), a university-owned electric energy utility system, which serves not only the campus, but also 6,000 Town of Blacksburg customers.

In other areas, however, the university is falling behind. Although the 2009/2013 Virginia Tech Climate Action Commitment was a leading effort for its time, from the perspective of 2020, it is limited in both scope and ambition. It did not include several sources of campus GHG, such as agriculture, business travel, and leased building space, the latter amounting to 13 percent of operational square footage. It did not mention renewable energy nor the human cost of climate change. Furthermore, its overall goal of an 80 percent reduction in GHG from 1990 levels by 2050, while a typical goal for its time, is not aggressive enough compared to the contemporary needs for climate action and the national movement of our peer institutions.

2020 VIRGINIA TECH CLIMATE ACTION COMMITMENT

The major product of the Working Group is a new Climate Action Commitment. It aims to be bold and visionary, but also comprehensive and pragmatic for a leading academic institution. Goals 1-9 target physical means to achieve carbon neutrality by 2030, Goals 10-14 address education, culture, social equity, and engaged implementation, and Goal 15 sets a longer-range goal of a fossil-fuel-fee campus. The Working Group also developed a set of potential pathways to achieve each goal. The table to the right lists the goals, and they are presented with summary pathways. More detailed pathways are presented in chapter 2.

Vision of the 2020 Virginia Tech Climate Action Commitment

In the spirit of Ut Prosim, Virginia Tech will be a leader in climate action in service to our community, the Commonwealth, and the world.

Mission of the 2020 Virginia Tech Climate Action Commitment

The mission of the 2020 Virginia Tech Climate Action Commitment is to achieve carbon neutrality by changing the university’s physical infrastructure, collective and individual behaviors, and educational mission; to engage everyone in creating a culture of sustainability; and to achieve these objectives through just and equitable means.
2020 VIRGINIA TECH
CLIMATE ACTION COMMITMENT GOALS

1. Achieve a carbon neutral Virginia Tech campus by 2030.
2. Achieve 100 percent renewable electricity by 2030.
3. Complete the total conversion of steam plant fuel to natural gas by 2025, plan for full transition to renewable steam plant fuel after 2025, and continue to improve efficiency of campus energy systems.
4. Reduce building energy consumption to enable carbon neutrality by 2030.
5. Operations of new buildings initiated by 2030 will be carbon neutral.
6. Agricultural, forestry, and land use operations will be carbon neutral by 2030.
7. Virginia Tech to become a Zero-Waste Campus by 2030.
9. Reduce single-occupancy-vehicle commuting to campus by 20 percent by 2025 and reduce transportation-related GHG emissions by 40 percent by 2030.
10. Integrate the Climate Action Commitment into Virginia Tech’s educational mission through the Climate Action Living Laboratory beginning in 2021.
11. Establish climate justice as a core value of the Virginia Tech Climate Action Commitment.
12. Diminish barriers to sustainable behaviors through institutional change, education and social marketing.
13. Implement the Virginia Tech Climate Action Commitment at a high level of university administration and governance; by integrating goals for facilities, education, and campus culture; and with stakeholder engagement for evaluation of goals and progress.
14. Develop innovative budgeting and financing mechanisms to generate funding and staffing to achieve Climate Action Commitment goals.
15. Develop Pathways after 2030 to eliminate fossil fuels and carbon offsets by 2050.
2020 Virginia Tech Climate Action Commitment:
SUMMARY OF GOALS AND PATHWAYS


Carbon neutral equals net-zero emissions of CO₂, CH₄, and NOₓ from Virginia Tech operations at Blacksburg campus based on the geographic and GHG scope of the 2020 Climate Action Commitment.

POTENTIAL PATHWAYS:
- 100 percent renewable electricity by 2030 can reduce emissions by 50 percent below 2019 levels.
- Total conversion from coal to natural gas in steam plant by 2025 can reduce GHG by 10 percent below 2019.
- Reduction of energy use in existing and new buildings can result in further emissions reductions of 10 percent, despite campus growth.
- Reduction of GHG from waste/recycling, transportation, and agriculture, forestry, and land use described below can reduce emissions by 10 percent.
- In 2030, remaining emissions can be negated by carbon offsets.

2. 100 Percent Renewable Electricity by 2030.

POTENTIAL PATHWAYS:
- 2020: achieve 30 percent renewable electricity via purchase of 20 percent renewable energy certificates (RECs) from APCO + APCO 10 percent renewable portfolio.
- 2020-2030: Achieve 100 percent renewable electricity by 2030 via combination of Virginia Tech rooftops/lands solar (15 MW), 3rd party owned PPA, and APCO owned SWVA PPA solar capacity (130 MW+15 MW+145 MW) to serve campus (95 MW) and town customers (50 MW) for 60 percent of needs plus 30 percent APCO renewable portfolio and 10 percent RECs to cover steam plant cogeneration.
- Integrate solar development into the Climate Action Living Laboratory (CALL) of academic instruction and research, including dual-use solar-farm production agrivoltaics; a 10-MW storage testbed/showcase project for smart micro-grid reliability and resilience research through Virginia Tech Electric Service and the Virginia Tech Power and Energy Center; and other instruction/research initiatives.
- As with all components of this Climate Action Commitment, full lifecycle analysis of renewables procurement should include the environmental and social justice costs and benefits of procured systems.
- The siting of renewable energy systems should employ best practices in public engagement to identify the most appropriate locations.
3. Complete the total conversion of steam plant fuel to natural gas by 2025, plan for full transition to renewable steam plant fuel after 2025, and continue to improve efficiency of campus energy systems.

**POTENTIAL PATHWAYS:**

- Addition of gas boiler #12 provides natural gas thermal capacity for all steam plant demand.
- VT’s new natural gas service contract signed in summer 2020 and effective until 2025, provides favorable price and reliability terms and prospects for renewable gas.
- For reliability and resilience, a plan is needed for backup fuel (such as liquefied natural gas (LNG), biochar, or other fuel) when natural gas is unavailable, and boiler redundancy (so-called “n+1”) in case of a boiler outage at a critical time.
- Improve chiller efficiency: By 2023 the Chiller Plant Phase II capital project will reduce central chiller energy usage by 20% from 2020; future campus growth needs for chilled water will be met from central plants where possible.
- Ten-year 2021-30 Energy Management Plan will improve efficiency of stand-alone chilled water plants
- Establish an online Climate Action Living Laboratory (CALL) Energy Dashboard for faculty, staff, and students to access and analyze campus facilities energy use data for instruction and research.
- After 2025, plan for transition to renewable energy in heating systems, considering renewable gas, geothermal and ground source heat pump systems, and other non-fossil-fuel options for heating existing and new districts of campus.
- Beginning with the CAC 2025 revision, develop a plan for full transition to renewable energy for campus heating systems. To promote zero emissions energy options in the plan, refine GHG inventory estimates of methane leakage from VT natural gas sources and include those estimates of methane leakage in the carbon neutral goal for 2035.

4. Reduce Building Energy Consumption to Enable Carbon Neutrality by 2030.

- By the end of 2022, reduce electricity consumption (kWh) by 10 percent and electricity intensity (kWh/gsf) by 20 percent below 2006 levels.
- By 2030, employ energy management retrofits to reduce total energy consumption in all buildings by 10 percent and energy use intensity (Btu+KWh/gsf) by 20 percent below 2020 levels.

**POTENTIAL PATHWAYS:**

- Implement an aggressive 2021-30 ten-year energy management plan updated annually to reduce total energy consumption in all buildings including auxiliaries by 10 percent.
- For leased buildings owned by the Virginia Tech Foundation, work with the Foundation to develop financial arrangements to improve efficiency and reduce emissions.
- By 2021, develop a campus-wide Climate Action Living Laboratory Green Lab program based on a pilot test-bed Green Lab to reduce energy, emissions, and materials in our most energy-intensive facilities.
- Reduce building energy and GHG emissions by smart operations, such as demand response, digital controls, thermostat settings, occupant behavior, and innovative space scheduling, especially in summer.
- Achieving these goals will require sufficient staffing in energy management.
5. Operations of New Buildings Initiated by 2030 will be Carbon Neutral.

- New building efficiency will conform to latest adopted LEED-Silver standards and ASHRAE 90.1 energy performance standards + 10 percent.
- By 2022, reduce total energy use intensity (EUI) in newly initiated buildings by 20 percent compared to 2020 existing buildings.
- By 2026, build a signature zero-net-energy (ZNE) building on campus as a showcase and learning model for the Climate Action Living Laboratory.
- By 2028, newly initiated buildings’ efficiency improvements will reduce total energy use intensity (EUI) in new buildings by 40 percent compared to 2020 existing buildings.

POTENTIAL PATHWAYS:

- In 2021, identify candidate new buildings for a showcase zero-net-energy (ZNE) building and begin fundraising to attract donors to help fund the project to be completed by 2026.
- Electricity currently contributes 50 percent of total GHG emissions. One hundred percent renewable electricity by 2030 will reduce building CO₂ emissions by more than 50 percent.
- By 2030, all newly initiated building design will have carbon neutral operations through 100 percent renewable electricity, improved energy efficiency, and carbon offsets.
- Post-occupancy evaluation (POE) should become standard practice to fine tune building operations and engage occupants to better serve users and reduce emissions.
- New buildings offer opportunities for campus Climate Action Living Laboratory research and instruction by faculty and students through field testing and use of emerging technologies, monitoring energy use, air quality, and occupant perceptions, and other projects.
- Achieving these goals will require sufficient engineering and design staffing.

POTENTIAL PATHWAYS:

‣ Develop the University Compost Facility at Kentland to provide benefits to campus organic waste management, help reduce animal waste GHG emissions, support soil health, and reduce need for new land for future land application of animal wastes.

‣ Adopt Campus Tree Policy to increase canopy cover from 16-to-25 percent and manage Virginia Tech trees, forests and woodlands to increase carbon sequestration and provide additional environmental benefits.

‣ Reduce agricultural and forestry net GHG emissions through more efficient operations, reduced animal enteric fermentation emissions, improved energy and fuel efficiency, possibly an anaerobic digester to produce usable methane, and other means.

‣ Use Virginia Tech agricultural lands to develop solar farms toward renewables goal, including co-use solar and farmland agrivoltaics for Climate Action Living Laboratory instruction and research.

‣ In 2030, offset any remaining net GHG emissions from agricultural/forestry operations with solar production from Virginia Tech agricultural land and/or by purchasing carbon offsets.

7. Virginia Tech to become a Zero-Waste Campus by 2030.

POTENTIAL PATHWAYS:

‣ Hire a zero-waste consultant to conduct a waste audit study and plan to evaluate organization, procedures, and staffing to enhance campus waste management.

‣ Based on consultant recommendations, consider hiring a campus waste manager.

‣ Engage personnel involved in campus waste management on a Waste/Recycling Council to help streamline operations and reduce redundancies.

‣ Develop University Compost Facility at Kentland to process campus organic waste from dining halls and athletics, veterinary and agriculture animal waste, yard trimmings, wood waste, non-recyclable soiled paper, and other compostables.

‣ Engage faculty, students, and staff in greater use of recycling/compost behavior using social marketing and media, incentives, and innovative approaches to advance Circular Economy and Pollution Prevention (P2) principles as part of the Climate Action Living Laboratory.

‣ Evaluate and improve as needed the management of specialty wastes, such as e-waste, laboratory waste, construction debris, and wastes from major sporting and other events.

8. Establish the Sustainability Procurement Policy and Procedures by 2022.

POTENTIAL PATHWAY:

‣ On a pilot basis, adopt, implement, and evaluate the 2020 Sustainable Procurement Policy.

‣ In 2022, the Energy & Sustainability Committee will assess the pilot project and work with the Procurement Department to formulate the Sustainability Procurement Policy v.2.
9. Reduce Single-Occupancy Vehicle (SOV) Commuting to Campus by 20 percent by 2025 and Reduce Transportation Related GHG Emissions by 40 percent by 2030.

POTENTIAL PATHWAYS:
- Promote walking/biking/transit as the preferred means of commuting to campus: Use parking policies, alternative transportation programs, campus mobility planning in collaboration with Town of Blacksburg, and encourage Blacksburg Transit (BT) programs to improve the safety and convenience of and promote walking, biking, and transit.
- Promote sustainable mobility choices through marketing, including social media, parking permit literature, gaming, university promotion literature and website, and student orientation.
- Promote non-commuting work and learning opportunities such as telecommuting, innovative online instruction, Internet conferencing, and other means.
- Improve infrastructure and traffic management to improve mobility choices and safety by reducing speed limits, improved bike and pedestrian path lighting, limiting/restricting vehicles in core campus, implementing current transportation plans, and coordinating with Town of Blacksburg plans.
- Improve vehicle efficiency and promote low-carbon emissions vehicles through Motor Pool purchases and development of electric vehicle charging stations on campus.
- Promote social equity in mobility and parking policies by developing effective and efficient commuting options for lower wage employees who cannot afford to live in Blacksburg, sliding-scale parking fees based on salary/wage, and collaboration with the Town of Blacksburg to provide affordable workforce housing proximate to campus.
- Reduce and negate business travel GHG emissions with carbon offsets.
- Establish an alternative mobility subcommittee of the Transportation and Parking Committee to recommend strategies to increase the non-SOV mode share on campus.

10. Integrate the Climate Action Commitment into Virginia Tech’s Educational Mission through the Climate Action Living Laboratory (CALL) Beginning in 2021.

POTENTIAL PATHWAYS:
- Recognize the excellent opportunities for student learning, faculty and student technical research, and staff development. Benefits include learning from and innovating creative solutions in-house for Virginia Tech’s climate initiatives and better engaging the entire university both in Blacksburg and other Virginia Tech locations in our quest for sustainable and just climate action.
- Establish the Climate Action Living Laboratory (CALL) in the new University Office for Climate Action and Sustainability (OCAS) to enhance offerings and build bridges between facilities and academic departments, facilitating and supporting opportunities.
• Alter norms and incentives to overcome traditional barriers and nurture cooperation between academic units (research and teaching) and operations units such as Division of Campus Planning, Infrastructure, and Facilities and auxiliary units including Dining Services, Housing and Residence Life, and Athletics. Greater collaboration between university units will help implement the Climate Action Commitment and integrate physical plant climate action with academics and campus life.

• Integrate Climate Action Living Laboratory (CALL) initiatives in other goals/pathways for renewables (2), energy materials, devices and systems (3), buildings (4, 5), agriculture (6), waste (7), transportation (9), climate justice (11), sustainable behaviors (12), and community engagement (13).

• Engage the university’s land grant extension and outreach programs to reflect the principles of the Climate Action Commitment and help implement them throughout the Commonwealth.

• Integrate the physical infrastructure elements of the Climate Action Commitment into the fabric of the university’s educational and research programs to expand funding opportunities for campus innovation from state and federal sources as well as foundations.

11. Establish Climate Justice as a Core Value of the Climate Action Commitment.

POTENTIAL PATHWAYS:

• Encourage an accelerated transition to carbon-neutral status as a climate-justice imperative.

• Ensure that the social impacts of Virginia Tech’s climate mitigation choices (e.g. energy, land use, and waste) are identified and addressed to the greatest extent possible.

• Establish a Climate Justice Subcommittee of the revised Climate Action, Sustainability, and Energy (CASE) Committee by 2021 with representation from students, faculty, and community members from frontline groups.

• Ensure that Virginia Tech climate action implementation plans recognize and assist vulnerable or frontline groups adversely affected by those plans, including low-wage Virginia Tech employees, tuition-paying students, VTES town ratepayers, historically marginalized people of color and Indigenous communities, coalfield communities, and others.

• Establish education, research, and outreach programs to assist vulnerable and historically marginalized groups mitigate and adapt to climate change and thrive in the new energy economy. These efforts should specifically target Virginia Tribes, African Americans in the New River Valley, coalfield communities in southwest Virginia, and coastal Virginia communities threatened by climate-related hazards.


POTENTIAL PATHWAYS:

• Implement infrastructural changes—from waste management to transportation to building operation—to make sustainable choices easier.
  
  › Identify structural, social and institutional barriers to sustainable behaviors.
  
  › Develop educational programs to foster pro-environmental behavior change.

• Design and implement choice architecture or “nudges” to promote sustainable behavior, while allowing for individual choice, using social media, gaming, and other means.

• Develop a shared toolkit of best practices in social marketing, rooted in behavioral sciences, for campus groups initiating sustainability initiatives.

• Nurture cross-campus partnerships to coordinate climate action and enhance sustainability initiatives.
13. Implement the Virginia Tech Climate Action Commitment.

... at a high level of university administration and governance;
... by integrating Climate Action goals for facilities, education, and campus culture; and
... with ongoing stakeholder engagement for evaluation of goals and progress.

POTENTIAL PATHWAYS:

‣ Governance: By fall 2021, restructure the university Energy and Sustainability Committee (E&SC), renaming it the Climate Action, Sustainability, Energy (CASE) Committee, and revising its charge, membership, and reporting, to oversee the implementation and review of the Climate Action Commitment goals and progress involving student, faculty, and staff stakeholders.

‣ Implementation/operations: Appoint a new university Chief Climate Action and Sustainability Officer (CCASO) to direct a reconstituted University Office of Climate Action and Sustainability (OCAS) to oversee Climate Action Commitment implementation and other campus sustainability initiatives. The CCASO would jointly report to the Senior Vice President and Chief Business Officer and to the Executive Vice President and Provost. The CCASO would chair the CASE Committee. The Facilities Division would, in parallel, appoint a director of strategic success to oversee a range of strategic Facilities issues including climate action and sustainability.

‣ Learning: Establish the Climate Action Living Laboratory (CALL) in the new OCAS to enhance offerings and build bridges between facilities and academic departments, facilitating and supporting opportunities (Goal 10).

‣ Duties of Operations and Governance units:
  › Collect data relevant to the Climate Action Commitment including GHG inventory and prepare an Annual Report of Climate Action Commitment progress each fall semester for the previous fiscal year.
  › Establish mechanisms to engage and educate the Virginia Tech community on the Climate Action Commitment and climate action.
  › Establish ad hoc committees to develop instructional, research and outreach programming for the Climate Action Living Laboratory (CALL).
  › Evaluate Climate Action Commitment goals according to best practices in light of new information and standards and direct update of the Climate Action Commitment on a five-year cycle.
  › Broaden the geographic scope of the Climate Action Commitment to all Virginia Tech properties in future iterations to include the entire university.
  › Advocate for allocation and prioritization of resources to support the Climate Action Commitment.

‣ Annual review: Conduct an in-depth annual review of the Climate Action Commitment goals and implementation, progress that involves student, staff, faculty, and community stakeholders. The results of this review will be shared publicly in an accessible and easy-to-read format.

14. Develop Innovative Budgeting and Financing Mechanisms to Generate Funding and Staffing to Achieve Climate Action Commitment Goals.

POTENTIAL PATHWAYS:

‣ Strategically invest university E&G and auxiliary funds to implement the 10-year Energy Management Plan at a level of $5 million/year in energy efficiency projects with a cumulative 8-year financial payback or 12 percent return on investment.

‣ Major investment is needed to implement the pathways for renewable electricity both on Virginia Tech buildings/lands and in the Southwest Virginia region, including the following options:
  › Virginia Tech-owned and developed projects on Virginia Tech buildings/land and
  › Utility or third party owned and developed projects on Virginia Tech buildings/land and in SWVA with Virginia Tech power purchase agreement (PPA).

The first option requires major Virginia Tech capital investment but provides greater long-term return and control, while the second requires no Virginia Tech capital but provides less long-term financial return. A combination of the two options may be used to meet the Climate Action Commitment renewables goal.

‣ As a unique power utility, VTES has opportunities for investment in renewable energy serving both campus and its town customers.

‣ The Virginia Tech Foundation helps the university achieve its goals and may be a valuable partner in implementing the Climate Action Commitment:
As owner of most of the leased academic space off campus, the Foundation has already agreed to provide funding for an energy efficiency retrofit pilot project in Corporate Research Center buildings on a revenue neutral basis.

Campus solar development provides another opportunity for Foundation investment with appropriate return on that investment.

Additional sources of funds to implement the Climate Action Commitment include, federal and state grants, research funding in connection with the Living Laboratory, advancement donations, philanthropic organizations and foundations, and low interest revenue bonds by VTES and auxiliaries.

In addition to project funding, implementation of the Climate Action Commitment will require upgrading the staff to rise to the needs of the commitment, especially in energy management, energy and utility systems, building analysis and design, waste management, university compost facility operation, and campus sustainability.

15. Develop Pathways After 2030 to Eliminate Fossil Fuels and Offsets by 2050.

POTENTIAL PATHWAYS:

- A long-term Utilities Master Plan should fully incorporate the goals of this Climate Action Commitment.
- It is difficult to anticipate how technology, the economy, and public policy will evolve in the next 10-30 years, necessitating revisions along the way:
  - 2025: 5-year Climate Action Commitment revision review explore options for 2030-2040 timeframe.
  - 2030: 5-year Climate Action Commitment revision review explore options for 2040-2050 timeframe.
- Beginning with the CAC 2025 revision, develop a plan for full transition to renewable energy for campus heating systems. To promote zero emissions energy options in the plan, refine GHG inventory estimates of methane leakage from VT natural gas sources and include those estimates of methane leakage in the carbon neutral goal for 2035.
- Eliminating offsets and fossil fuels would require significant changes in Virginia Tech’s physical plant. The university is dependent on natural gas in the steam plant and eliminating natural gas will require replacement by a non-carbon fuel (e.g., biogas, hydrogen, biochar) or a new heating system based not on steam but on hot water perhaps generated by renewable electricity and geothermal ground-source heat pump systems. Some universities are moving in that direction, and Virginia Tech will have much to learn from them about the prospects.
The 15 goals and pathways include many target dates for actions or achievement as part of their implementation. They are summarized in the table below, with date, relevant goal number and action milestone.

<table>
<thead>
<tr>
<th>DATE</th>
<th>ACTION MILESTONE</th>
<th>GOAL</th>
</tr>
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<tbody>
<tr>
<td>2020</td>
<td>BOV approves 2020 Virginia Tech Climate Action Commitment</td>
<td>2</td>
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<tr>
<td></td>
<td>30 percent renewable electricity</td>
<td>2</td>
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<tr>
<td>2021</td>
<td>E&amp;SC renamed Climate Action, Sustainability &amp; Energy (CASE) Committee</td>
<td>13</td>
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<td></td>
<td>Operation plan for Climate Action Living Laboratory (CALL)</td>
<td>11</td>
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<tr>
<td></td>
<td>Candidate identified for zero-net-energy new building to be built by 2026</td>
<td>5</td>
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<tr>
<td></td>
<td>First year of 10-year 2021-30 Energy Management Plan</td>
<td>3, 4</td>
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<tr>
<td></td>
<td>Fishburn Forest student-led assessment</td>
<td>2</td>
</tr>
<tr>
<td>2022</td>
<td>2.3 MW solar PV on Virginia Tech rooftop and land</td>
<td>2</td>
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<tr>
<td></td>
<td>VTES Solarize Program for Town customers, 250 kW net metered</td>
<td>2</td>
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<tr>
<td></td>
<td>Electricity use 10% below 2006 (Governor’s E.O. 43)</td>
<td>4</td>
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<tr>
<td></td>
<td>Newly initiated buildings EUI 20% below 2020 existing average</td>
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<tr>
<td></td>
<td>Sustainable Procurement Policy v.2. implemented</td>
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<tr>
<td>2023</td>
<td>Virginia Tech Foundation energy efficiency plan for leased buildings (CRC)</td>
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<td></td>
<td>VTES Community Solar project for Town customers 0.5-1 MW</td>
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<td>2024</td>
<td>Chiller Phase II Upgrade complete</td>
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<tr>
<td>2025</td>
<td>Complete conversion of steam plant fuel to natural gas</td>
<td>3</td>
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<tr>
<td></td>
<td>Begin planning transition to renewable steam plant fuel</td>
<td>3</td>
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<tr>
<td></td>
<td>Five-year Climate Action Commitment update: Explore options for 2030-2040</td>
<td>15</td>
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<tr>
<td></td>
<td>Recycling rate 55%; waste diversion rate 85%; reduce trash to landfill/capita by 25%</td>
<td>7</td>
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<tr>
<td></td>
<td>Reduce single-occupancy-vehicle commuting by 20%</td>
<td>9</td>
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<tr>
<td></td>
<td>10 MW solar PV on Virginia Tech lands</td>
<td>2</td>
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<tr>
<td></td>
<td>Explore geothermal heat pump hot water heating options for new districts</td>
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<td>2026</td>
<td>Signature Zero-Net-Energy (ZNE) building on campus</td>
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<tr>
<td>2027</td>
<td>10 MW battery storage for Virginia Tech Smart Grid research by VT PEC-VTES partnership</td>
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<td></td>
<td>35 MW solar PPA with APCO/third party in SWVA including coalfields</td>
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<tr>
<td>2028</td>
<td>Newly initiated buildings EUI 40% below 2020 existing average</td>
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<td>2029</td>
<td>100 MW solar PPA with APCO/third party in SWVA including coalfields</td>
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<tr>
<td>2030</td>
<td>Five-year Climate Action Commitment update: Explore options for 2040-50</td>
<td>15</td>
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<tr>
<td></td>
<td>Carbon neutral campus operations</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>100% renewable electricity</td>
<td>2</td>
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<tr>
<td></td>
<td>Total building energy use down 10%; EUI down 20% below 2020</td>
<td>4</td>
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<tr>
<td></td>
<td>Newly initiated buildings carbon neutral operations</td>
<td>5</td>
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<td></td>
<td>Carbon neutral agriculture/forestry operations</td>
<td>6</td>
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<tr>
<td></td>
<td>Zero-waste campus</td>
<td>7</td>
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<tr>
<td></td>
<td>Transportation emissions reduced 40% from 2020</td>
<td>9</td>
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<tr>
<td>2050</td>
<td>Fossil fuel-free campus</td>
<td>15</td>
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COSTS AND BENEFITS OF 2020 VIRGINIA TECH CLIMATE ACTION COMMITMENT GOALS AND PATHWAYS

The Working Group assessed the impacts of the 2020 Virginia Tech Climate Action Commitment goals and pathways including GHG emissions, fiscal costs and benefits, and implications for Virginia Tech’s educational mission, operations, policies and governance, and culture. These implications are far-reaching and are presented in Chapter 3.

Major benefits are reduction of GHG and enhanced university reputation, culture, and educational programs linked to campus climate action and sustainability.

To implement the Climate Action Commitment goals, there will be costs and benefits for the university:

- Some initiatives (e.g., upgrades to the steam plant) are part of the cost of doing business, and the added costs to incorporate climate action goals may be small.
- Others, such as energy efficiency retrofits, have a positive return on investment.
- Others, including solar electric projects, will require major investment; however, creative power purchase agreements can reduce capital cost and achieve cost-effective results.
- Finally, some projects (e.g., the proposed University Compost Facility at Kentland) require capital and operating expenditures but provide substantial operational and educational benefits.

Effective Climate Action Commitment implementation will require changes in operations and governance. Goal 13 recommends establishing a University Office for Climate Action and Sustainability (OCAS) directed by a Chief Climate Action and Sustainability Officer that reports jointly to the Senior Vice President and Chief Business Officer and the Executive Vice President and Provost.

The university’s financial uncertainties resulting from the Covid-19 pandemic require flexibility in implementing the Climate Action Commitment. As presented on the next page, much can be done with limited investment.
Although the 2020 Virginia Tech Climate Action Commitment focuses on 2030 as the target date for its goals, the pathway to those goals begins the day the Climate Action Commitment is officially adopted by the university, if not before. The Working Group has identified a number of initiatives and projects that can and should be acted on in the short term from now until 2022 with full understanding of the current budget constraints of the university. The “shovel ready” initiatives aim to get a jump start on necessary action and to demonstrate the university’s commitment. They are listed below sorted by (a) low-cost/no-cost/revenue-neutral initiatives, (b) ongoing and budgeted projects, and (c) new priorities in need of funding and/or approval. These initiatives are described in Chapter 9.

a. Low/no cost/revenue neutral project/policy/planning initiatives

- Establish framework for Climate Action Living Laboratory (CALL) through the Office of the Provost and Executive Vice President, college deans, and the Division of Campus Planning, Infrastructure, and Facilities.
- Restructure the Energy and Sustainability Committee to oversee 2020 Virginia Tech Climate Action Commitment, renaming it the Climate Action, Sustainability, and Energy (CASE) Committee.
- Establish an alternative mobility subcommittee of the Transportation and Parking Committee.
- Develop plan for steam plant resilience/redundancy needs to complete conversion to natural gas by 2025.
- Develop a Utility Master Plan.
- Develop a Campus Energy Dashboard.
- Initiate Student Project for Fishburn Wind Energy Assessment.
- Promote partnership between Virginia Tech Electric Service and the Virginia Tech Power and Energy Center as part of Climate Action Living Laboratory.
- Initiate partnership with APCO on renewable electricity development.
- Initiate community relations with VTES Town of Blacksburg customers.
- Identify candidates for a zero-net-energy building on campus and develop fundraising plan.
- Engage Virginia Tech Foundation in energy efficiency retrofit plan for leased buildings.
- Adopt a Campus Tree Policy.
- Seek external funding for agrivoltaics test array at Catawba Sustainability Center.
- Implement and evaluate Sustainable Procurement Policy.

b. Ongoing budgeted projects

- Implement ongoing steam plant and chiller upgrade projects.
- Evaluate new natural gas contract on implications for Climate Action Commitment goals and pathways.
- 2020 RECs for 30 percent renewable electricity, continue through 2022 as needed.
- Implement Design and Construction Standards in light of Climate Action Commitment Goals.
- Fill the Virginia Tech energy manager position and supplement staff as needed.
- Implement budgeted projects in the Parking and Transportation Plan.

c. New priority projects in need of funding/approval

- Establish the University Office of Climate Action & Sustainability (OCAS) and appoint a university Chief Climate Action and Sustainability Officer (CCASO).
- Develop University Compost Facility at Kentland.
- Initiate 10-year energy management plan, 2021-30, and develop first year projects.
- Develop solar projects on campus: 2.3 MW by 2022: Sterrett and other rooftop projects.
- Implement zero-waste management consultant study.
- Implement a Green Lab Program.
- Dedicate consistent, annual funds to maintain existing trails, sidewalks, bicycle infrastructure.
- Implement transportation infrastructure plans (e.g., MMTF).
COMMUNITY ENGAGEMENT

Engaging the university community in the Climate Action Commitment update was part of the Working Group’s charge and a critical component of our effort. The process overall—with its robust network of subcommittees—may be considered a true ‘collaborative’ enterprise, with over 130 students, staff, faculty, and community members involved. In terms of wider outreach, the Engagement Subcommittee originally planned on holding a major half-day town hall event on campus. Unfortunately, COVID-19 made that impossible.

The group responded by deploying a range of ‘physically distanced’ engagement activities:

- Dedicated website portal introducing the Climate Action Commitment process and sharing committee materials.
- Dedicated email address for the initiative.
- A series of 10 videos sharing progress of the Working Group and the subcommittees.
- A survey distributed widely throughout the community with 242 respondents.
- A series of 12 hour-long Zoom “convenings,” attended by at least 226 participants.

Each of these streams of engagement is detailed in Chapter 5, and insights and information collected through them is summarized. Key findings from these various engagement efforts include:

- The vast majority of participants/respondents believe that climate change is a serious threat, and thus support aggressive action on the part of the university. In fact, many feel that Virginia Tech is not doing enough.
- The importance of setting ambitious goals and sticking to them was emphasized.
- Emphasis was placed on systemic or “upstream” solutions rather than placing the onus on behavior change of individuals, given that many of the barriers to action are infrastructural and institutional (e.g., poor cycling infrastructure).
The above notwithstanding, many did see individual actions as important and needing of attention. Creative ideas emerged around how to, for example, ‘gamify’ desired actions.

Key champions are important for propelling further action, including potentially a higher-level champion within university administration. This may be achieved through a stronger OCAS (see recommendation #13).

There is strong support for taking a more holistic view of understanding our greenhouse gas emissions, accounting for emissions associated with community behaviors like commuting.

There is broad support for key actions proposed through the Climate Action Commitment update process, including:

- A shift to carbon neutrality and 100 percent renewable energy, including integrating renewable energy infrastructure into campus design.
- Alternative transportation and reductions in private automobile usage, including a ban on freshmen car parking permits.
- Improved waste management, including a new compost facility, and reductions at the source through purchasing decisions that minimize waste and promote sustainability.
- The creation of a ‘living laboratory’ to foster partnerships between campus operations, local partners, and the academic (teaching and research) enterprise.
- A green lab system, and similar programs to promote sustainable behaviors within work and student life spaces.
- Optimize building design, including with energy, water, and waste monitoring.
- The need to account for climate justice in any and all actions taken.
- Stronger partnerships with other institutions, including the Town of Blacksburg.
- There is a strong desire to see engagement continue as the university shifts to implementation.
COMPARISON WITH PEER UNIVERSITIES

One of the Working Group’s deliverables is a comparison of Virginia Tech progress in climate action to peer universities, and this is presented in Chapter 8. There are three good reasons for doing this:

1. To offer an evaluative reference point (i.e., to see how we are doing),
2. To adopt effective plans and avoid ineffective ones (i.e., to borrow good ideas), and
3. To demonstrate that what the university is proposing is feasible and in line with similar universities (i.e., to show it is not far-fetched to have a bold and aggressive climate action plan).

Knowing that our perspective is comprehensive and that other universities have different strengths in different areas, the Working Group decided to have our thematic subcommittees select the peer and exemplary universities to assess in their specific areas.

Those areas include:

- Buildings
- Renewable Energy
- Energy Systems
- Transportation
- Carbon neutrality and GHG inventory
- Budget and Finance
- Climate Justice
- Waste-Recycling-Composting
- Agriculture, Forestry, Land Use
- Community Engagement

In most areas the Working Group selected 3-8 universities that they consider to be peers or to be exemplary in that area. Some are from Virginia, some are Land Grants, some are from the Atlantic Coast Conference, some are far away, but all offer good examples and benchmark our progress to-date and our aspirations for the 2020 Climate Action Commitment.

All in all, our peer reviews told us that, while our 2009 Climate Action Commitment was right for its time and has led to improved energy efficiency and reductions in GHG emissions, it now lags behind the actions of many of our peers. This deficiency is most notable in the quest for carbon neutrality, for renewable energy, for zero-net-energy buildings, for alternative transportation, and for community engagement to advance climate action and sustainable behavior.

Many of our related programs do standup well in comparison to others, but if Virginia Tech is to regain its leadership role in climate action and sustainability, it needs to move to a new Climate Action Commitment that is right for this time. Of course, that is what it has set out to do, and the Working Group believes that it has found the right balance of aggressive, yet pragmatic, climate action. The group’s goals are to achieve carbon neutrality by 2030, 100 percent renewable electricity by 2030, investment in energy efficiency in existing and new buildings, carbon neutral agriculture, a zero-waste campus, sustainable procurement practices, sustainable mobility, climate justice as a core value, community engagement, and the establishment of a Climate Action Living Laboratory that will integrate these goals into the fabric of the university.

Relative to the peer and exemplary universities reviewed in this analysis, this 2020 Virginia Tech Climate Action Commitment sets the stage for Virginia Tech to shine as an exemplar and leader in university climate action. Beyond our climate neutrality and zero-waste campus goals, six areas of the 2020 Climate Action Commitment stand Virginia Tech above the rest:

1. The detail and specificity of the pathways developed to achieve the Climate Action Commitment goals
2. Our own unique utility VTES leading our way to 100 percent renewable electricity, while most other universities are totally dependent on private utilities and companies.
3. Using our considerable land resources not only to manage our agricultural climate impacts, but also to sequester carbon and develop renewable energy.
4. Incorporating in our carbon neutral goal scope 3 GHG emissions relating to behavior (e.g., commuting, waste/recycling, water/wastewater, business travel), while most others include just scope 1 and 2.
5. Integrating our physical climate action into the university’s educational mission through the Climate Action Living Laboratory (CALL).
6. Specifically addressing community engagement, sustainable behaviors, and social equity and justice as core elements of our climate action.
LEARN MORE

View the full Virginia Tech 2020 Climate Action Commitment Working Group Report and associated appendices at svpoa.vt.edu/index/VTCACRevision. Questions may be addressed to climateaction@vt.edu.
Virginia Tech 2020 Climate Action Commitment
Working Group

Final Technical Report
July 2020
Revised October 2020

Executive Summary

1. Introduction

Part I: Virginia Tech 2020 Climate Action Commitment

2. Virginia Tech 2020 Climate Action Commitment
3. Implications of VT 2020 CAC Goals and Pathways
4. Implementing, Engaging, Monitoring, Reporting, Updating VT CAC
5. What We Learned from Community Engagement

Part II: Progress in Climate Action since 2009 CAC and Comparison to Peers

6. Progress in Climate Action since 2009 Climate Action Commitment
7. Critique of Progress
8. Comparison to Peer Universities

9. Conclusion and Proposed Immediate Actions

Appendix A:
Executive Summaries of VT CAC Working Group Subcommittee Reports

Appendix B:
Working Group and subcommittee membership, Charge to Working Group, Student and faculty climate action

Slide decks (separate)
Volume II: Full Subcommittee Reports (separate)
# Virginia Tech 2020 Climate Action Commitment
## Working Group
### Final Technical Report

## Executive Summary

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES.1 Working Group Process</td>
<td>ES-1</td>
</tr>
<tr>
<td>ES.2 Progress Implementing 2009 VT Climate Action Commitment</td>
<td>ES-2</td>
</tr>
<tr>
<td>ES.3 The Virginia Tech 2020 Climate Action Commitment</td>
<td>ES-3</td>
</tr>
<tr>
<td>ES.4 Implementation Milestones</td>
<td>ES-12</td>
</tr>
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<td>ES.5 Costs and Benefits of the VT 2020 CAC Goals and Pathways</td>
<td>ES-13</td>
</tr>
<tr>
<td>ES.6 Immediate Near-Term Initiatives (2020-2022)</td>
<td>ES-13</td>
</tr>
<tr>
<td>ES.7 Community Engagement</td>
<td>ES-14</td>
</tr>
<tr>
<td>ES.8 Comparison with Peer Universities</td>
<td>ES-15</td>
</tr>
</tbody>
</table>

## 1. Introduction

1.1 Seize the moment
1.2 The Charge to the Climate Action Commitment Working Group
1.3 VT CAC Working Group Process
1.4 Roadmap to this Working Group Report

## Part I: Virginia Tech 2020 Climate Action Commitment

### 2. Virginia Tech 2020 Climate Action Commitment

2.1 Factors, Criteria, and Process for Developing Goals and Pathways
2.2 Virginia Tech 2020 Climate Action Commitment
   2.2.1 Climate Action Commitment Vision and Mission
   2.2.2 Virginia Tech 2020 CAC Expanded Goals and Pathways

### 3. Implications of VT 2020 CAC Goals and Pathways

3.1 Impacts on GHG Emissions
3.2 University Budget & Finance
3.3 University Educational Mission
3.4 University Operations and Staffing
3.5 University Policies and Governance
3.6 University Culture

### 4. Implementing, Engaging, Monitoring, Reporting and Updating VT CAC

4.1 Structure, Operation and Governance of VT CAC Implementation
   4.1.1 Structure and Operations of VT CAC
   4.1.2 Governance of VT CAC
   4.1.3 Duties of Operations and Governance
4.2 Engaging the Community
4.3 Annual Report of Progress and AASHE STARS Reporting
4.4 GHG Inventory Procedures
4.5 Timing of Recommended Pathways and Implementation Milestones
4.6 Five-year CAC update

### 5. What We Learned from Community Engagement

5.1 Means of Engagement: Webpages, Videos, Survey, and VT News Coverage
5.2 Survey Process and Results
   5.2.1 Survey Responses
5.3 Zoom Convening Ideas and Exit Survey
5.4 Conclusion
Part II: Progress in Climate Action since 2009 CAC and Comparison to Peers

6. Progress in Climate Action since 2009/2013 Climate Action Commitment
   6.1 Summary and Introduction
   6.2 Progress Implementing 2009/2013 VT CAC
      6.2.1 VTCAC #1: VT a Leader
      6.2.2 VTCAC #2: VT CAC in Strategic Plan
      6.2.3 VTCAC #5, #13: Sustainability Office, Annual Reporting
      6.2.4 VTCAC #3: GHG emission reduction target
      6.2.5 VTCAC #4, #6, #7: Energy efficiency improvements
      6.2.6 VTCAC #8: Waste recycling
      6.2.7 VTCAC #9: Procurement
      6.2.8 VTCAC #11: Transportation energy efficiency, alternative transportation
      6.2.9 VTCAC #10: Community engagement
      6.2.10 VTCAC #14: Funding for sustainability programs
      6.2.11 Other Progress: Virginia Tech Electric Service (VTES)
   6.3 Structure, Partnerships, and Arrangements to address Sustainability

7. Critique of Progress
   7.1 GHG Scope of 2009/2013 CAC
   7.2 Renewables
   7.3 Energy
   7.4 Buildings
   7.5 Agriculture, Forestry, Land Use
   7.6 Waste, Recycling, Composting
   7.7 Transportation
   7.8 Sustainable Choices
   7.9 Community Engagement and Climate Justice

8. Comparison to Peer Universities
   8.1 Carbon Neutrality and GHG Inventory
   8.2 Renewable Energy
   8.3 Buildings
   8.4 Energy Systems
   8.5 Transportation
   8.6 Waste/Recycling/Composting
   8.7 Agriculture, Forestry, Land Use
   8.8 Sustainable Choices
   8.9 Climate Justice
   8.10 Community Engagement
   8.11 Budget & Finance

9. Conclusion and Proposed Immediate Actions
   9.1 Concluding Comments
   9.2 Proposed Immediate Actions, Projects and Initiatives (2020-2022)
      9.2.1 Low/no cost/revenue neutral project/policy/planning initiatives
      9.2.2 Ongoing Budgeted Projects
      9.2.3 Priority projects in need of funding/approval

Appendix A: Executive Summaries of VT CAC Working Group Subcommittee Reports
   A-1: Agriculture/Forestry/Land Use GHG
   A-2: Budget & Finance
   A-3: Buildings Opportunities
   A-4: Climate Justice
   A-5: Community Engagement
   A-6: Energy Opportunities
   A-7: GHG inventory
   A-8: Peer Comparison
   A-9: Renewables Opportunities
   A-10: Sustainable Choices
   A-11: Transportation Opportunities
   A-12: Waste/Recycling/Composting and Procurement

Appendix B:
   VT CAC Working Group & Subcommittee Membership
   Dr. Pinkney’s Charge Letter to Working Group
   Glossary
   Climate Strike Student Demands
   Faculty Senate Climate Action Resolution
Executive Summary

From January to June 2020, the Virginia Tech Climate Action Commitment Working Group executed its charge to evaluate the university’s current position and our future role in addressing climate change. During this same period, a global pandemic has brought unprecedented hardship and suffering, particularly for the most vulnerable among us. Nevertheless, this unique time is engendering a tremendous spirit of innovation and collaboration. Around the world, people are coming together to address historic challenges. We are becoming bolder and more creative. And we are reimagining every aspect of our lives.

In this public health crisis, we are learning an important lesson: when experts testify to looming crises, when science speaks, society must take decisive action. People are learning to trust science and use it to guide action, shape responses, and inform policy-making. It has also exposed critical and uneven vulnerabilities in our economy and society, raising calls for recovery efforts to redress inequities. Similarly, our actions to combat climate change and strengthen our community’s resilience must be guided by a just and equitable transition to sustainable new strategies, policies and practices. As a new world dawns, we must bounce “forward,” not “back,” to seize the promise and opportunities of this moment.

One such promise is the prospect of working together, creatively, urgently and with care, to address pressing challenges. Climate change is a slow-growing emergency compared to the lightning strike of Covid-19, but it will be more painful and longer lasting. This moment of pause gives governments, businesses, communities, and universities the opportunity to evaluate their current positions and their future roles. While the individual actions of any single institution may seem insignificant for the magnitude of the problem, the world cannot be saved without our collective action.

In late 2019—prompted by the demands of students and other community members involved in Climate Strikes and resolutions from the Faculty and Staff Senates, Student Government Association, and Graduate Student Assembly—President Tim Sands and Senior Vice President Dwayne Pinkney established a Climate Action Commitment Working Group (WG) comprised of 26 faculty, students, staff, and community members. In announcing the creation of the WG, President Sands stated that: “climate change presents one of the world’s most pressing problems… and Virginia Tech has a duty to respond.” The Group was charged to assess the university’s progress in implementing the 2009/2013 VT Climate Action Commitment, compare our experience to peer institutions, and develop a new Commitment.

Virginia Tech, like other universities, is facing both short-term fiscal challenges and long-term uncertainties in these challenging times. Nonetheless, the university remains committed to taking bold action to do its part to address the climate emergency.

ES.1 Working Group Process

In order to engage a broad range of expertise and perspectives from across the university and wider community and conduct an ambitious work program, the Group established 12 subcommittees including a total of 130 faculty, students, community members, and staff to
investigate and discuss specific issues relevant to the Commitment. Most of the subcommittees met weekly from early February through the end of May. The subcommittees included:

- Agriculture, Forestry, and Land Use
- Budget and Finance
- Buildings Opportunities
- Climate Justice
- Community Engagement
- Energy Opportunities
- Greenhouse Gas (GHG) Inventory
- Peer Institutions Comparison
- Renewables Opportunities
- Structuring Sustainable Choices
- Transportation Opportunities
- Waste-Recycling-Composting and Procurement

The Working Group (WG) developed several mechanisms to expand community involvement in the process, including a website and email address for comment and two online surveys. Plans for face-to-face town hall meetings and conference sessions had to be reimagined when the university shut down after spring break. In place of the in-person events, the WG hosted 12 Zoom Convening sessions in April, attended by over 220 participants who provided excellent feedback. In anticipation of the Convening sessions, the WG and its subcommittees also developed ten creative videos that describe the CAC proposals (See: [https://svpoa.vt.edu/index/VTCACRevision.html](https://svpoa.vt.edu/index/VTCACRevision.html)).

Our work has focused on developing effective strategies the university can advance to achieve meaningful climate action. Throughout the multitude of WG, subcommittee, and community zoom meetings, our discussions have also reflected on the important opportunity for Virginia Tech to reinvent itself, not only in its commitment to climate action, but also in its responsiveness to the needs of the world around us, in the spirit of Ut Prosim.

Our recommended climate action commitment is bold, aggressive, and comprehensive. Its goals range from necessary upgrades to the campus physical plant to reduce GHG emissions, to integrating those improvements into the educational mission through a Climate Action Living Laboratory, to engaging everyone in creating a culture of sustainability—all to position Virginia Tech as a leader as the clean energy economy evolves in the Commonwealth and the world.

**ES.2 Progress Implementing 2009 VT Climate Action Commitment**

Virginia Tech has made considerable progress in implementing its 2009/2013 Climate Action Commitment (2009 VT CAC) over the past decade, and our assessment of progress is presented in chapters 6 and 7. The 2009 VT CAC & Sustainability Plan was a cutting-edge effort for its time, but a decade later it fails to prescribe what climate scientists recognize as necessary actions and also falls short of many peer universities’ recent initiatives.

*In many respects, however, we have been forging ahead beyond the 2009/2013 CAC.* Virginia Tech is a recognized leader in campus sustainability with a Sustainability Tracking and Rating System (STARS) Gold score that is highest among Virginia and ACC peer institutions. VT has won numerous awards and recognitions since 2010, including Princeton Review’s top 50 Green Colleges (#14 in 2019), the Governor’s Environmental Excellence Award (7 times), Best Workplaces for Commuters (every year, gold in 2019-20), Bicycle Friendly Campus (every year, silver level in 2019), Tree Campus USA certification (every year), and many others.
We have reduced greenhouse gas (GHG) emissions by 24% from 2006 to 2019, despite 22% growth in campus building size and enrollment. This reduction is faster than the 2009 CAC targeted trajectory. It resulted from investments in energy efficiency in existing and new buildings, and most importantly conversion to natural gas in the steam plant, which was enabled by a new gas pipeline. We now have 36 LEED certified buildings constructed or in process, amounting to 30% of campus space, and in 2015-2020 we invested $14 million in energy efficiency improvements, resulting in energy and dollar savings with a 5-year payback.

We have done much to develop alternative transportation choices, including dual use trails, bike share, ride share, and car share programs. We have record ridership on our partner Blacksburg Transit and innovative plans for campus mobility. We have a functional, although fragmented, waste management program with an 80% waste diversion rate (waste diverted from landfill) and 40% recycling rate, although shy of the 50% by 2020 goal of the 2013 VT CAC. In April 2020, our Procurement Department unveiled a Sustainable Procurement Policy; and in May, Facilities produced new Design and Construction Building Standards, both reflecting the ideals of the VT Climate Action Commitment.

We have an enviable array of sustainability-related academic programs, majors, coursework, and research, including in green engineering, natural resources, agriculture, power and energy systems, environmental policy, and smart and sustainable cities. In the STARS rating system, VT scores 89% of possible points in academic categories. It also scores 95% of possible points in campus engagement. We have a rich campus life for students with a wide array of opportunities, including strong environmental student organizations. Indeed, these student groups have energized the university community to move forward on climate action, both in 2008 and in 2019.

Our Facilities Department has embraced sustainability and climate action as part of its mission, and our Office of Sustainability is second to none, even with limited staff. We have the highly unique and valuable Virginia Tech Electric Service (VTES), a university-owned electric energy utility system, which serves not only the campus but also 6000 Blacksburg customers.

In other areas, however, we are falling behind. Although the 2009/2013 VT CAC was a leading effort for its time, from the perspective of 2020, it is limited in both scope and ambition. It did not include several sources of campus GHG, such as agriculture, business travel, and leased building space, the latter amounting to 13% of operational square footage. It did not even mention renewable energy nor the human cost of climate change. Furthermore, its overall goal of an 80% reduction in GHG from 1990 levels by 2050, while a typical goal for its time, is not aggressive enough compared to the contemporary needs for climate action and the national movement of our peer institutions.

**ES.3 The Virginia Tech 2020 Climate Action Commitment**

The major product of the Working Group is a new Climate Action Commitment. It aims to be bold and comprehensive, but also to be visionary and pragmatic for a leading academic institution. Goals 1-9 target physical means to achieve carbon neutrality by 2030, goals 10-14 address education, culture, social equity, and engaged implementation, and goal 15 sets a longer-range goal.
of a fossil-fuel-fee campus. The Group also developed a set of potential pathways to achieve each goal. The table below lists the goals, and they are presented with summary pathways. More detailed pathways are outlined in chapter 2.

**Vision** of the Virginia Tech 2020 Climate Action Commitment:

_In the spirit of Ut Prosim, Virginia Tech will be a leader in climate action in service to our community, the Commonwealth, and the world._

**Mission** of the Virginia Tech 2020 Climate Action Commitment:

_Stated by Board of Visitors: “climate change presents one of the world’s most pressing problems...and Virginia Tech has a duty to respond.”_

_The mission of the Virginia Tech 2020 Climate Action Commitment is to achieve carbon neutrality by changing our physical infrastructure, collective and individual behaviors, and educational mission; to engage everyone in creating a culture of sustainability; and to achieve these objectives through just and equitable means._

**Virginia Tech 2020 Climate Action Commitment**

The 2020 CAC update process yielded the following 15 goals, which are expanded upon below.

1. Carbon neutral Virginia Tech campus by 2030
2. 100% renewable electricity by 2030
3. Complete the total conversion of steam plant fuel to natural gas by 2025, plan for a full transition to renewable steam plant fuel after 2025, and continue to improve the efficiency of campus energy systems
4. Reduce building energy consumption to enable carbon neutrality by 2030
5. Operations of new buildings initiated by 2030 will be carbon neutral
6. Agricultural, forestry, and land use operations will be carbon neutral by 2030
7. Virginia Tech to become a Zero-Waste Campus by 2030
8. Establish the Sustainable Procurement Policy and Procedures by 2022
9. Reduce single-occupancy-vehicle commuting to campus by 20% by 2025 and reduce transportation-related GHG emissions by 40% by 2030
10. Integrate the CAC into Virginia Tech’s educational mission through the Climate Action Living Laboratory beginning in 2021
11. Establish climate justice as a core value of the VT Climate Action Commitment
12. Diminish barriers to sustainable behaviors through institutional change, education and social marketing
13. Implement the VT Climate Action Commitment at a high level of university administration and governance; by integrating goals for facilities, education, and campus culture; and with stakeholder engagement for evaluation of goals and progress
14. Develop innovative budgeting and financing mechanisms to generate funding and staffing to achieve Climate Action Commitment goals
15. Develop Pathways after 2030 to eliminate fossil fuels and carbon offsets by 2050
VT 2020 Climate Action Commitment Summary Goals and Pathways

Goal 1. Carbon Neutral Virginia Tech Campus by 2030

**Carbon neutral** = net-zero emissions of CO₂, CH₄, and NO₂ from VT operations at Blacksburg campus based on the geographic and GHG scope of the 2020 CAC.

**Potential Pathways:**

- **100% renewable electricity** by 2030 can reduce emissions by 50% below 2019 levels
- **Total conversion of steam plant to natural gas** by 2025 can reduce GHG by 10% below 2019
- **Reduction of energy use** in existing and new buildings can result in further emissions reductions of 10%, despite campus growth
- **Reduction of GHG** from waste/recycling, transportation, and agriculture, forestry, and land use described below can reduce emissions by 10%
- In 2030, remaining emissions can be negated by **carbon offsets**

Goal 2. 100% Renewable Electricity by 2030

**Potential Pathways:**

- **2020: achieve 30% renewable electricity** via purchase 20% renewable energy certificates (RECs) from APCO + APCO 10% renewable portfolio
- **2020-2030: Achieve 100% renewable electricity by 2030** via combination of VT rooftops/lands (15 MW), 3rd party owned PPA, and APCO owned SWVA PPA capacity (130 MW+15 MW=145 MW) to serve campus (95 MW) and town customers (50 MW) for 60% of needs plus 30% APCO renewable portfolio and 10% RECs to cover steam plant cogeneration
- Integrate solar development into the **Climate Action Living Laboratory** (CALL) of academic instruction and research, including dual-use solar-farm production agrivoltaics; a 10-MW storage testbed/showcase project for smart micro-grid reliability and resilience research through Virginia Tech Electric Service and the VT Power & Energy Center; and other instruction/research initiatives
- As with all components of this CAC, full **lifecycle analysis** of renewables procurement should include the environmental and social justice costs and benefits of procured systems
- The **siting** of renewable energy systems should employ best practices in public engagement to identify the most appropriate locations

Goal 3. Complete the total conversion of steam plant fuel to natural gas by 2025, plan for a full transition to renewable steam plant fuel after 2025, and continue to improve the efficiency of campus energy systems

**Potential pathways:**

- Addition of gas boiler #12 provides **natural gas thermal capacity for all steam plant demand**
- VT’s new **natural gas service contract** signed in summer 2020 and effective until 2025, provides favorable price and reliability terms and prospects for renewable gas
- For **reliability and resilience**, a plan is needed for **backup fuel** (such as liquefied natural gas)
(LNG), biochar, or other fuel) when natural gas is unavailable, and **boiler redundancy** (so-called “n+1”) in case of a boiler outage at a critical time.

- **Improve chiller efficiency**: By 2023 the Chiller Plant Phase II capital project will reduce central chiller energy usage by 20% from 2020; future campus growth needs for chilled water will be met from central plants where possible.

- **Ten-year 2021-30 Energy Management Plan** will improve efficiency of stand-alone chilled water plants

- Establish an online Climate Action Living Laboratory (CALL) **Energy Dashboard** for faculty, staff, and students to access and analyze campus facilities energy use data for instruction and research

- Beginning with the CAC 2025 revision, develop a **plan for full transition to renewable energy for campus heating systems**. To promote zero emissions energy options in the plan, refine GHG inventory estimates of methane leakage from VT natural gas sources and include those estimates of methane leakage in the carbon neutral goal for 2035.

### Goal 4. Reduce Building Energy Consumption to Enable Carbon Neutrality by 2030

- **a.** By the end of 2022, reduce electricity consumption (kWh) by 10% and electricity intensity (kWh/gsf) by 20% below 2006 levels

- **b.** By 2030, employ energy management retrofits to reduce total energy consumption in all buildings by 10% and energy use intensity (Btu+kWh/gsf) by 20% below 2020 levels

**Potential pathways:**

- Implement an **aggressive 2021-30 ten-year energy management plan** updated annually to reduce total energy consumption in all buildings including auxiliaries by 10%

- For **leased buildings** owned by the VT Foundation, work with the Foundation to develop financial arrangements to improve efficiency and reduce emissions

- By 2021, develop a campus-wide **Climate Action Living Laboratory Green Lab program** based on a pilot test-bed Green Lab to reduce energy, emissions, and materials in our most energy-intensive facilities

- **Reduce building energy and GHG emissions by smart operations**, such as demand response, digital controls, thermostat settings, occupant behavior, and innovative space scheduling, especially in summer

- Achieving these goals will require sufficient **staffing in energy management**

### Goal 5. Operations of New Buildings Initiated by 2030 will be Carbon Neutral

- **a.** New building efficiency will conform to latest adopted LEED-Silver standards and ASHRAE 90.1 energy performance standards + 10%

- **b.** By 2022, reduce total energy use intensity (EUI) in newly initiated buildings by 20% compared to 2020 existing buildings

- **c.** By 2026, build a signature zero-net-energy (ZNE) building on campus as a showcase and learning model for the Climate Action Living Laboratory

- **d.** By 2028, newly initiated buildings’ efficiency improvements will reduce total energy use intensity (EUI) in new buildings by 40% compared to 2020 existing buildings

**Potential pathways:**

- In 2021, identify candidate new buildings for a **showcase zero-net-energy (ZNE) building** and
begin fundraising to attract donors to help fund the project to be completed by 2026

- Electricity currently contributes 50% of total CO₂ emissions. **100% renewable electricity** by 2030 will reduce building CO₂ emissions by more than 50%
- By 2030, all newly initiated building design will have **carbon neutral** operations through 100% renewable electricity, improved energy efficiency, and carbon offsets
- **Post-occupancy evaluation** (POE) should become standard practice to fine tune building operations and engage occupants to better serve users and reduce emissions
- New buildings offer opportunities for campus **Climate Action Living Laboratory** research and instruction by faculty and students through field testing and use of emerging technologies, monitoring energy use, air quality, and occupant perceptions, and other projects
- Achieving these goals will require **sufficient engineering and design staffing**

**Goal 6. Agricultural, Forestry, and Land Use Operations Carbon Neutral by 2030**

*Potential pathways:*

- Develop the **University Compost Facility at Kentland** to provide benefits to campus organic waste management, help reduce animal waste GHG emissions, support soil health, and reduce need for new land for future land application of animal wastes
- **Adopt Campus Tree Policy** to increase canopy cover from 16% to 25% and manage VT trees, forests and woodlands to increase carbon sequestration and provide additional environmental benefits
- **Reduce agricultural and forestry net GHG emissions** through more efficient operations, reduced animal enteric fermentation emissions, improved energy and fuel efficiency, possibly an anaerobic digester to produce usable methane, and other means
- **Use VT agricultural lands to develop solar farms** toward renewables goal, including co-use solar and farmland agrivoltaics for Climate Action Living Laboratory instruction and research
- In 2030, **offset any remaining net GHG emissions** from agricultural/forestry operations with solar production from VT agricultural land and/or by purchasing carbon offsets

**Goal 7. Virginia Tech to become a Zero-Waste Campus by 2030**

  a. **Increase landfill waste diversion rate to 85% by 2025**
  b. **Increase waste recycling rate to 55% by 2025**
  c. **Reduce waste to landfill per capita by 25% by 2025**

*Potential Pathways:*

- **Hire a zero-waste consultant** to conduct a waste audit study and plan to evaluate organization, procedures, and staffing to enhance campus waste management
- Based on consultant recommendations, consider hiring a **campus waste manager**
- Engage personnel involved in campus waste management on a **Waste/Recycling Council** to help streamline operations and reduce redundancies
- Develop **University Compost Facility at Kentland** to process campus organic waste from dining halls and athletics, veterinary and agriculture animal waste, yard trimmings, wood waste, non-recyclable soiled paper, and other compostables
- **Engage faculty, students, and staff** in greater use of recycling/compost behavior using social marketing and media, incentives, and innovative approaches to advance Circular Economy and
Pollution Prevention (P2) principles as part of the Climate Action Living Laboratory
- Evaluate and improve as needed the management of specialty wastes, such as e-waste, laboratory waste, construction debris, and wastes from major sporting and other events

**Goal 8. Establish the Sustainability Procurement Policy and Procedures by 2022**

*Potential Pathway:*
- On a pilot basis, adopt, implement, and evaluate the 2020 Sustainable Procurement Policy
- In 2022, the Energy & Sustainability Committee will assess the pilot project and work with the Procurement Department to formulate the Sustainability Procurement Policy v.2

**Goal 9. Reduce Single-Occupancy Vehicle (SOV) Commuting to Campus by 20% by 2025 and Reduce Transportation-Related GHG Emissions by 40% by 2030**

*Potential Pathways:*
- **Promote walking/biking/transit as the preferred means of commuting to campus:** use parking policies, alternative transportation programs, campus mobility planning in collaboration with Town of Blacksburg, and encourage Blacksburg Transit (BT) programs to improve the safety and convenience of and promote walking/biking/transit
- **Promote sustainable mobility choices** through good marketing including social media, parking permit literature, gaming, university promotion literature/website, and student orientation
- **Promote non-commuting work and learning opportunities** such as telecommuting, innovative on-line instruction, Internet conferencing, and other means
- **Improve infrastructure and traffic management to improve mobility choices and safety** by reducing speed limits, improved bike/ped path lighting, limiting/restricting vehicles in core campus, implementing current transportation plans, and coordinating with Town of Blacksburg plans
- **Improve vehicle efficiency and promote low-carbon emissions vehicles** through Motor Pool purchases and development of electric vehicle charging stations on campus
- **Promote social equity in mobility and parking policies** by developing effective and efficient commuting options for lower wage employees who cannot afford to live in Blacksburg, sliding-scale parking fees based on salary/wage, and collaboration with the Town to provide affordable workforce housing proximate to campus
- **Reduce and negate business travel GHG emissions with carbon offsets**
- **Establish an alternative mobility subcommittee of the Transportation and Parking Committee** to recommend strategies to increase the non-SOV mode share on campus

**Goal 10. Integrate the CAC into Virginia Tech’s Educational Mission through the Climate Action Living Laboratory (CALL) beginning 2021**

*Potential Pathways:*
- **Recognize the excellent opportunities for student learning, faculty and student technical research, and staff development.** Benefits include learning from and innovating creative solutions in-house for VT’s climate initiatives and better engaging the entire university both in
Blacksburg and other Virginia Tech locations in our quest for sustainable and just climate action

- Establish the **Climate Action Living Laboratory (CALL)** in the new University Office for Climate Action & Sustainability (OCAS) to enhance offerings and build bridges between facilities and academic departments, facilitating and supporting opportunities
- Alter norms and incentives to overcome traditional barriers and nurture cooperation between academic units (research and teaching) and operations units such as Facilities and auxiliary units including dining, residence and athletics. Greater collaboration between university units will help implement the CAC and integrate physical plant climate action with academics and campus life
- Integrate Climate Action Living Laboratory (CALL) initiatives in other goals/pathways for renewables (2), energy materials, devices and systems (3), buildings (4, 5), agriculture (6), waste (7), transportation (9), climate justice (11), sustainable behaviors (12), and community engagement (13)
- Engage the university’s land grant Extension and Outreach programs to reflect the principles of the CAC and help implement them throughout the Commonwealth
- Integrate the physical infrastructure elements of the CAC into the fabric of the university’s educational and research programs to expand funding opportunities for campus innovation from state and federal sources as well as foundations

### Goal 11. Establish Climate Justice as a Core Value of the Climate Action Commitment

*Potential Pathways:*

- Encourage an **accelerated transition to carbon-neutral status** as a climate-justice imperative
- Ensure that the **social impacts** of Virginia Tech’s climate mitigation choices (e.g. energy, land use, and waste) are identified and addressed to the greatest extent possible
- Establish a **Climate Justice Subcommittee** of the revised Climate Action, Sustainability, and Energy (CASE) Committee by 2021 with representation from students, faculty, and community members from frontline groups
- Ensure that VT climate action implementation **plans recognize and assist vulnerable or frontline groups adversely affected by those plans**, including low-wage VT employees, tuition-paying students, VTES town ratepayers, historically marginalized people of color and Indigenous communities, coalfield communities, and others
- **Establish education, research, and outreach programs to assist vulnerable and historically marginalized groups** mitigate and adapt to climate change and thrive in the new energy economy. These efforts should specifically target Virginia Tribes, African Americans in the New River Valley, coalfield communities in southwest Virginia, and coastal Virginia communities threatened by climate-related hazards

### Goal 12. Diminish Barriers to Sustainable Behaviors through Institutional Change, Education and Social Marketing

*Potential Pathways:*

- Identify structural, social and institutional barriers to sustainable behaviors
• **Implement infrastructural changes**—from waste management to transportation to building operation—to make sustainable choices easier
• **Develop educational programs** to foster pro-environmental behavior change
• **Design and implement choice architecture or “nudges”** to promote sustainable behavior, while allowing for individual choice, using social media, gaming, and other means
• **Develop a shared toolkit of best practices** in social marketing, rooted in behavioral sciences, for campus groups initiating sustainability initiatives
• **Nurture cross-campus partnerships** to coordinate climate action and enhance sustainability initiatives

**Goal 13. Implement the VT Climate Action Commitment**

...at a high level of university administration and governance;  
...by integrating CAC goals for facilities, education, and campus culture;  
...with ongoing stakeholder engagement for evaluation of goals and progress

**Potential Pathways:**

• **Governance:** By fall 2021, restructure the university Energy and Sustainability Committee (E&SC), renaming it the **Climate Action, Sustainability, Energy (CASE) Committee**, and revising its charge, membership, and reporting, to oversee the implementation and review of the CAC goals and progress involving student, faculty, and staff stakeholders

• **Implementation/operations:** Appoint a new university **Chief Climate Action and Sustainability Officer (CCASO)** to direct a reconstituted **University Office of Climate Action and Sustainability (OCAS)** to oversee CAC implementation and other campus sustainability initiatives. The CCASO would jointly report to the Senior Vice President and Chief Business Officer and to the Executive Vice President and Provost. The CCASO would chair the CASE Committee. The Facilities Division would, in parallel, appoint a director of strategic success to oversee a range of strategic Facilities issues including climate action and sustainability

• **Learning:** Establish the **Climate Action Living Laboratory (CALL)** in the new OCAS to enhance offerings and build bridges between facilities and academic departments, facilitating and supporting opportunities (Goal 10)

• **Duties of Operations and Governance units:**
  o Collect data relevant to the CAC including GHG inventory and prepare an **Annual Report** of CAC Progress each fall semester for the previous fiscal year  
  o Establish mechanisms to **engage and educate** the Virginia Tech community on the CAC and climate action  
  o Establish ad hoc committees to develop instructional, research and outreach programming for the **Climate Action Living Laboratory (CALL)**  
  o Evaluate CAC goals according to best practices in light of new information and standards and direct **update of the CAC on a five-year cycle**  
  o **Broaden the geographic scope** of the CAC to all Virginia Tech properties in future iterations to include the entire University  
  o **Advocate** for allocation and prioritization of resources to support the CAC

• **Annual review:** Conduct an in-depth annual review of the CAC goals and implementation progress that involves student, staff, faculty, and community stakeholders. The results of this review will be shared publicly in an accessible and easy-to-read format
Goal 14. Develop Innovative Budgeting and Financing Mechanisms to Generate Funding and Staffing to Achieve Climate Action Commitment Goals

Potential Pathways:

- Strategically invest university E&G and Auxiliary funds to implement the **10-year Energy Management Plan** at a level of $5 million/year in energy efficiency projects with a cumulative 8-year financial payback or 12% return on investment.
- Major investment is needed to implement the **pathways for renewable electricity** both on VT buildings/lands and in the SWVA region, including the following options:
  - **VT owned** and developed projects on VT buildings/land, and
  - **Utility or 3\textsuperscript{rd} party owned** and developed projects on VT buildings/land and in SWVA with VT power purchase agreement (PPA).

The first option requires major VT capital investment but provides greater long-term return and control, while the second requires no VT capital but provides less long-term financial return. A combination of the two options may be used to meet the CAC renewables goal.
- As a unique **power utility**, VTES has opportunities for investment in renewable energy serving both campus and its town customers.
- The **Virginia Tech Foundation** helps the university achieve its goals and may be a valuable partner in implementing the CAC:
  - As owner of most of the **leased academic space** off campus, the Foundation has already agreed to provide funding for an energy efficiency retrofit pilot project in Corporate Research Center buildings on a revenue neutral basis.
  - **Campus solar development** provides another opportunity for Foundation investment with appropriate return on that investment.

- **Additional sources of funds** to implement the CAC include, federal and state grants, research funding in connection with the Living Laboratory, advancement donations, philanthropic organizations and foundations, and low interest revenue bonds by VTES and Auxiliaries.
- In addition to project funding, implementation of the CAC will require **upgrading the staff** to rise to the needs of the commitment, especially in energy management, energy and utility systems, building analysis and design, waste management, university compost facility operation, and campus sustainability.

Goal 15. Develop Pathways After 2030 to Eliminate Fossil Fuels and Offsets by 2050

Potential Pathways:

- A long-term **Utilities Master Plan** should fully incorporate the goals of this Climate Action Commitment.
- It is difficult to anticipate how technology, the economy, and public policy will evolve in the next 10-30 years, necessitating revisions along the way:
  - **2025: 5-year CAC revision** review explore options for 2030-2040 timeframe.
  - **2030: 5-year CAC revision** review explore options for 2040-2050 timeframe.
- Beginning with the CAC 2025 revision, develop a **plan for full transition to renewable energy for campus heating systems**. To promote zero emissions energy options in the plan, such as green hydrogen, hot water heating with geothermal heat pumps, refine GHG inventory estimates of methane leakage from VT natural gas sources and include those **estimates of methane leakage in the carbon neutral goal for 2035**.
ES.4 Implementation Milestones

The 15 goals and pathways include many target dates for actions or achievement as part of their implementation. They are summarized in the table below, with date, relevant goal number and action milestone.

**VT 2020 CAC Implementation Milestones**

<table>
<thead>
<tr>
<th>Date</th>
<th>Goal</th>
<th>Milestone</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>2</td>
<td>30% Renewable Electricity</td>
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<td></td>
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<td>BOV approves VT 2020 CAC</td>
</tr>
<tr>
<td>2021</td>
<td>13</td>
<td>E&amp;SC renamed Climate Action, Sustainability &amp; Energy (CASE) Committee</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>Operation plan for Climate Action Living Laboratory (CALL)</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Candidate identified for Zero-Net-Energy new building to be built by 2026</td>
</tr>
<tr>
<td></td>
<td>3,4</td>
<td>1st year of 10-year 2021-2030 Energy Management Plan</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Fishburn Forest student-led wind assessment</td>
</tr>
<tr>
<td>2022</td>
<td>2</td>
<td>2.3 MW solar PV on VT rooftop and land</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>VTES Solarize program for Town customers, 250 kW net metered</td>
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<tr>
<td></td>
<td>4</td>
<td>Electricity use 10% below 2006 (Governor’s E.O. 43)</td>
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<td></td>
<td>5</td>
<td>Newly initiated buildings EUI 20% below 2020 existing average</td>
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<td></td>
<td>8</td>
<td>Sustainable Procurement Policy v.2</td>
</tr>
<tr>
<td>2023</td>
<td>14</td>
<td>VT Foundation energy efficiency plan for leased buildings (CRC)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>VTES Community Solar project for Town customers 0.5-1 MW</td>
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<tr>
<td>2024</td>
<td>3</td>
<td>Chiller Phase II Upgrade complete</td>
</tr>
<tr>
<td>2025</td>
<td>15</td>
<td>Total conversion to natural gas in steam plant; plan for transition to renewable fuel</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5-year CAC update: Explore options for 2030-2040</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Recycling rate 55%; Waste diversion rate 85%; reduce trash to landfill/capita by 25%</td>
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<tr>
<td></td>
<td>9</td>
<td>Reduce Single-occupancy-vehicle commuting by 20%</td>
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<tr>
<td></td>
<td>2</td>
<td>10 MW solar PV on VT lands</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Explore geothermal heat pump hot water heating options for new districts</td>
</tr>
<tr>
<td>2026</td>
<td>5</td>
<td>Signature Zero-Net-Energy (ZNE) building on campus</td>
</tr>
<tr>
<td>2027</td>
<td>2</td>
<td>10 MW battery storage for VT Smart Grid research by VT PEC-VTES partnership</td>
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<tr>
<td></td>
<td>2</td>
<td>35 MW solar PPA with Apco/3rd party</td>
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<tr>
<td>2028</td>
<td>5</td>
<td>Newly initiated buildings EUI 40% below 2020 existing average</td>
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<td>2029</td>
<td>2</td>
<td>100 MW solar PPA with Apco/3rd party</td>
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<tr>
<td>2030</td>
<td>15</td>
<td>5-year CAC update: Explore options for 2040-2050</td>
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<tr>
<td></td>
<td>1</td>
<td>Carbon neutral campus operations</td>
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<tr>
<td></td>
<td>2</td>
<td>100% Renewable Electricity</td>
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<tr>
<td></td>
<td>4</td>
<td>Total building energy use down 10%, EUI down 20% below 2020</td>
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<td></td>
<td>5</td>
<td>Newly initiated buildings carbon neutral operations</td>
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<td></td>
<td>6</td>
<td>Carbon neutral agriculture/forestry operations</td>
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<tr>
<td></td>
<td>7</td>
<td>Zero Waste campus</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>Transportation emissions reduced 40% from 2020</td>
</tr>
<tr>
<td>2050</td>
<td>15</td>
<td>Fossil fuel free campus</td>
</tr>
</tbody>
</table>
ES.5 Costs and Benefits of VT 2020 CAC Goals and Pathways

The Working Group assessed the impacts of the 2020 VT CAC goals and pathways including GHG emissions, fiscal costs and benefits, and implications for Virginia Tech’s educational mission, operations, policies and governance, and culture. These implications are far-reaching and are presented in chapter 3.

Major benefits are reduction of GHG and enhanced university reputation, culture, and educational programs linked to campus climate action and sustainability. To implement the CAC goals, there will be costs and benefits for the university:

- Some initiatives (e.g., upgrades to the steam plant) are part of the cost of doing business, and the added costs to incorporate climate action goals may be small.
- Others, such as energy efficiency retrofits, have a positive return on investment.
- Others, including solar electric projects, will require major investment; however, creative power purchase agreements can reduce capital cost and achieve cost-effective results.
- Finally, some projects (e.g., the proposed University Compost Facility at Kentland) require capital and operating expenditures but provide substantial operational and educational benefits.

Effective CAC implementation will require changes in operations and governance. Goal 13 recommends establishing a University Office for Climate Action & Sustainability (OCAS) directed by a Chief Climate Action & Sustainability Officer that reports jointly to the Senior Vice President and Chief Business Officer and the Executive Vice President and Provost. These arrangements are described in chapter 4.

ES.6 Immediate Near-Term Initiatives (2020-2022)

Although the 2020 VT Climate Action Commitment focuses on 2030 as the target date for its goals, the pathway to those goals begins the day the CAC is officially adopted by the University, if not before. The Working Group has identified a number of initiatives and projects that can and should be acted on in the short term from now until 2022 with full understanding of the current budget constraints of the university. The “shovel ready” initiatives aim to get a jump start on necessary action and to demonstrate the university’s commitment. They are listed below sorted by (a) low-cost/no-cost/revenue-neutral initiatives, (b) ongoing and budgeted projects, and (c) new priorities in need of funding and/or approval. These initiatives are described in chapter 9.

a. Low/no cost/revenue neutral project/policy/planning initiatives

- Establish framework for Climate Action Living Laboratory (CALL) through Provost’s Office, College Deans, and Facilities Department
- Restructure the Energy & Sustainability Committee to oversee 2020 VT CAC, renaming it the Climate Action, Sustainability, and Energy (CASE) Committee
- Establish an alternative mobility subcommittee of the Transportation and Parking Committee
- Develop plan for steam plant resilience/redundancy for total conversion to natural gas by 2025
- Develop Utility Master Plan
- Develop Campus Energy Dashboard
- Initiate Student Project for Fishburn Wind Energy Assessment
- Promote partnership between Virginia Tech Electric Service and the VT Power and Energy Center as part of Climate Action Living Laboratory
- Initiate partnership with APCO on renewable electricity development
- Initiate community relations with VTES Town customers
- Identify candidates for a zero net energy building on campus and develop fundraising plan
- Engage VT Foundation in energy efficiency retrofit plan for leased buildings
- Adopt Campus Tree Policy
- Seek external funding for agrivoltaics test array at Catawba Sustainability Center
- Implement and evaluate Sustainable Procurement Policy

b. Ongoing budgeted projects
- Implement ongoing steam plant and chiller upgrade projects
- Evaluate new natural gas contract on implications for CAC goals and pathways
- 2020 RECs for 30% renewable electricity, continue through 2022 as needed
- Implement Design & Construction Standards in light of CAC Goals
- Fill the VT Energy Manager Position and supplement staff as needed
- Implement budgeted projects in Parking & Transportation Plan

c. New priority projects in need of funding/approval
- Establish the University Office of Climate Action & Sustainability (OCAS) and appoint a university Chief Climate Action & Sustainability Officer (CCASO)
- Develop University Compost Facility at Kentland
- Initiate 10-year energy management plan, 2021-2030, and develop first year projects
- Develop solar projects on campus: 2.3 MW by 2022: Sterrett and other rooftop projects
- Implement Zero-waste management consultant study
- Implement a Green Lab Program
- Dedicate consistent, annual funds to maintain existing trails, sidewalks, bicycle infrastructure
- Implement transportation infrastructure plans (e.g., MMTF)

ES.6 Community Engagement

Engaging the university community in the CAC update was part of our charge and a critical part of our effort. The process overall--with its robust network of subcommittees--may be considered a true ‘collaborative’ enterprise, with over 120 students, staff, faculty, and community members involved. In terms of wider outreach, the Engagement Subcommittee originally planned on holding a major half-day town hall event on campus. Unfortunately, COVID-19 made that impossible. The group responded by deploying a range of ‘physically distanced’ engagement activities:

- Dedicated website portal introducing the CAC process and sharing committee materials
  https://svpoa.vt.edu/index/VTCACRevision.html
- Dedicated email address for the initiative
- A series of 10 videos sharing progress of the Working Group and the subcommittees
- A survey distributed widely throughout the community with 242 respondents
- A series of 12 hour-long Zoom “convenings,” attended by at least 226 participants
Each of these streams of engagement is detailed in Chapter 5, and insights and information collected through them is summarized. **Key findings from these various engagement efforts include:**

- The vast majority of participants/respondents believe that **climate change is a serious threat**, and thus support aggressive action on the part of the university. In fact, many feel that VT is not doing enough.
- The importance of **setting ambitious goals and sticking to them** was emphasized.
- Emphasis was placed on **systemic or “upstream” solutions** rather than placing the onus on behavior change of individuals, given that many of the barriers to action are infrastructural and institutional (e.g., poor cycling infrastructure).
- The above notwithstanding, many did see **individual actions as important** and needing of attention. Creative ideas emerged around how to, for example, ‘gamify’ desired actions.
- **Key champions** are important for propelling further action, including potentially a higher-level champion within university administration. This may be partnered with a **stronger Office of Sustainability**.
- There is strong support for taking a more holistic view of **understanding our greenhouse gas emissions**, accounting for emissions associated with community behaviors like commuting.
- There is **broad support for key actions proposed** through the CAC update process, including:
  - A shift to **carbon neutrality and 100% renewable energy**, including integrating renewable energy infrastructure into campus design.
  - **Alternative transportation** and reductions in private automobile usage, including a ban on freshmen car parking permits.
  - **Improved waste management**, including a new compost facility, and reductions at the source through purchasing decisions that minimize waste and promote sustainability.
  - The creation of a ‘living laboratory’ to foster partnerships between campus operations, local partners, and the academic (teaching and research) enterprise.
  - A ‘green lab’ system, and similar programs to promote sustainable behaviors within work and student life spaces.
  - Optimize **building design**, including with energy, water, and waste monitoring.
  - The need to account for **climate justice** in any and all actions taken.
  - **Stronger partnerships** with other institutions, including the Town of Blacksburg.
  - There is a strong desire to see engagement continue as the university shifts to implementation.

**ES.8 Comparison with Peer Universities**

One of the Working Group’s deliverables is a comparison of Virginia Tech progress in climate action to peer universities, and this is presented in chapter 8. There are three good reasons for this:

1. To offer an evaluative reference point (i.e., to see how we are doing),
2. To adopt effective plans and avoid ineffective ones (i.e., to borrow good ideas), and
3. To demonstrate that what we’re proposing is feasible and in line with similar universities (i.e., to show it is not far-fetched to have a bold and aggressive climate action plan).

Knowing that our perspective is comprehensive and that other universities have different strengths in different areas, we decided to have our specialty subcommittees select the peer and exemplary universities to assess in their specialty area. Those areas include:
In most areas we selected 3-8 universities that we consider to be peers or to be exemplary in that area. Some are from Virginia, some are Land Grants, some are from the Atlantic Coast Conference, some are far away, but all offer good examples and benchmark our progress to-date and our aspirations for our 2020 Climate Action Commitment.

All in all, our peer reviews told us that, while our 2009 Climate Action Commitment was right for its time and has led to improved energy efficiency and reductions in GHG emissions, it now lags behind the actions of many of our peers. This deficiency is most notable in the quest for carbon neutrality, for renewable energy, for zero waste, for zero-net-energy buildings, for alternative transportation, and for community engagement to advance climate action and sustainable behavior.

Many of our related programs do standup well in comparison to others, but if Virginia Tech is to regain its leadership role in climate action and sustainability, we need to move to a new Climate Action Commitment that is right for this time. Of course, that is what we have set out to do, and we believe that we have found the right balance of aggressive, yet pragmatic, climate action. Our goals are for carbon neutrality by 2030, 100% renewable electricity by 2030, investment in energy efficiency in existing and new buildings, carbon neutral agriculture, a zero-waste campus, sustainable procurement practices, sustainable mobility, climate justice as a core value, community engagement, and the establishment of a Climate Action Living Laboratory that will integrate these goals into the fabric of the university.

Relative to the peer and exemplary universities reviewed in this analysis, this 2020 VT Climate Action Commitment sets the stage for Virginia Tech to shine as an exemplar and leader in university climate action. Beyond our climate neutrality and zero-waste campus goals, six areas of the 2020 CAC stand Virginia Tech above the rest:

1. The detail and specificity of the pathways developed to achieve the CAC goals
2. Our own unique utility VTES leading our way to 100% renewable electricity, while most other universities are totally dependent on private utilities and companies
3. Using our considerable land resources not only to manage our agricultural climate impacts, but also to sequester carbon and develop renewable energy
4. Incorporating in our carbon neutral goal scope 3 GHG emissions relating to behavior (e.g., commuting, waste/recycling, water/wastewater, business travel), while most others include just scope 1 & 2
5. Integrating our physical climate action into the university’s educational mission through the Climate Action Living Laboratory (CALL).
6. Specifically addressing community engagement, sustainable behaviors, and social equity and justice as core elements of our climate action.
1. Introduction

1.1 Seize the Moment

From January to June 2020, the Virginia Tech Climate Action Commitment Working Group executed its charge to evaluate the university’s current position and our future role in addressing climate change. During this same period, a global pandemic has brought unprecedented hardship and suffering, particularly for the most vulnerable among us. Yet, this unique time is engendering a tremendous spirit of innovation and collaboration. Around the world, people are coming together to address historic challenges. We are becoming bolder and more creative. And we are reimagining every aspect of our lives.

In this public health crisis, we are learning an important lesson: when experts testify to looming crises, when science speaks, society must take decisive action. People are learning to trust science and use it to guide action, shape responses, and inform policy-making. It has also exposed critical and uneven vulnerabilities in our economy and society, raising calls for recovery efforts to redress inequities. Similarly, our actions to combat climate change and strengthen our community’s resilience must be guided by a just and equitable transition to sustainable new strategies, policies and practices. As a new world dawns, we must bounce “forward,” not “back,” to seize the hope and promise of this moment.

One such promise is the prospect of working together, creatively, urgently, and with care, to address pressing challenges. Climate change is a slow-growing emergency compared to the lightning strike of Covid-19, but it will be more painful and longer lasting. This moment of pause gives governments, businesses, communities, and universities the opportunity to evaluate their current positions and future roles. While the individual actions of any single institution may seem insignificant for the magnitude of the problem, the world cannot be saved without their collective action.

The Working Group of 26 faculty, students, staff, and community members was established by President Tim Sands and Senior Vice President Dwayne Pinkney because, as they said, “climate change presents one of the world’s most pressing problems…and Virginia Tech has a duty to respond.” Virginia Tech, like other universities, is facing both short-term fiscal challenges and long-term uncertainties in these challenging and tumultuous times. Nonetheless, the university remains committed to taking bold action to do its part to address the climate emergency. The Group was charged to assess the university’s progress in implementing the 2009/2013 VT Climate Action Commitment, compare our experience to peer institutions, and develop our new Commitment.

Our work focused on the smart ways the university can advance genuine climate action. Furthermore, through the multitude of working group, subcommittee, and community zoom meetings, our discussion has also reflected on the opportunity for Virginia Tech to reinvent itself, not only in its commitment to climate action, but also in its responsiveness to the needs of the world around us, in the spirit of Ut Prosim.
Universities play important roles in the U.S. and around the world. They aim to create innovative, sustainable, inclusive, and just communities as models for the future. They are societies’ laboratories of change. Virginia Tech is not alone in this quest. We already lead our peer universities in some respects, but we have fallen behind in many others. Our 2009 VT Climate Action Commitment & Sustainability Plan was a leading effort for its time, but a decade later it falls short of both necessary action and the recent initiatives of many peer universities.

This recommended 2020 Climate Action Commitment is bold, aggressive, and comprehensive. Its goals are many and range from necessary upgrades to the campus physical plant to reduce GHG emissions, to integrating these improvements into the educational mission through a Climate Action Living Laboratory, to engaging everyone in creating a culture of sustainability—all to position Virginia Tech as a leader, as the Commonwealth and the world evolve to the clean energy economy.

1.2 The Charge to the Climate Action Commitment Working Group

During fall semester 2019, Virginia Tech students involved in Climate Strikes met with President Tim Sands with a series of climate action demands. The Faculty and Staff Senates, SGA, and GSA all passed resolutions calling for climate action (see Appendix B). In November 2019, President Sands issued a statement that Virginia Tech has a duty to respond to the pressing problem of climate change. He called on Senior Vice President Dwayne Pinkney to establish a working group of faculty, students, and staff to develop a new Climate Action Commitment, revising the original commitment endorsed by the Board of Visitors in 2009 and updated in 2013.

In December 2019, Dr. Pinkney formed the Climate Action Commitment (CAC) Working Group of ten faculty, ten students, and six staff and community representatives, and charged the Group to develop two deliverables:

a. A summary of the university’s progress on sustainability since the original 2009/2013 CAC
b. A proposed revision to the CAC

The summary of progress was to outline the structure, partnerships, and arrangements developed to address sustainability; include high-level data summarizing progress; and compare our achievements to peer institutions. The revised CAC should consider updates to vision, mission and definitions; outline clear, measurable, and realistic goals; consider long-term impact of goals on university policies, operations, and budget; identify metrics and elements for determining progress meeting the goals; and follow university format (see charge letter in Appendix B).

President Sands requested the Group complete its work by May so governance approvals can occur during fall 2020. The charge to the committee asked for an Interim Report by March 1 and the final reports by May 7, 2020. The Interim Report was delivered in March. However, the Covid-19 pandemic shutdown delayed the final reports until the end of June. We are pleased to herewith submit the final report and look forward to thoughtful deliberation as it passes through governance and is ultimately implemented.
1.3 VT CAC Working Group Process

The Working Group could not convene until the start of spring semester (January 21st, 2020). Because of the short timeline, the Group was very busy. In order to engage a broad range of expertise and perspectives from the university community, the Group established 12 subcommittees that involved over 130 faculty, students, and staff members in the investigation and discussion of specific issues relevant to the Commitment. The membership of the Working Group and the subcommittees as well as the executive summaries of the 12 subcommittee reports are provided in the Appendices. Most of the subcommittees met weekly from February through May. The subcommittees include:

- Agriculture, Forestry, Land Use GHG
- Budget and Finance
- Buildings Opportunities
- Climate Justice
- Community Engagement
- Energy Opportunities
- Greenhouse Gas Inventory
- Peer Institutions Comparison
- Renewables Opportunities
- Structuring Sustainable Choices
- Transportation Opportunities
- Waste-Recycling-Composting and Procurement

The subcommittees provided an opportunity to involve a wide range of university stakeholders in the process. They have brought expertise and knowledge necessary to analyze the opportunities and constraints involved in our needed climate action. In addition, these many subcommittee members broadened the campus participation in our effort and with that, broader support for our results. Among the participants were 35 staff members who provided needed data and reality checks. Each subcommittee prepared its own report for the Working Group; these subcommittee reports are provided in Volume II to this report.

In addition to the subcommittees, the Working Group, through its Community Engagement Subcommittee, developed several mechanisms for communication and involvement in the process. The Group used a website and email address for comment and two online surveys. Plans for face-to-face town hall meetings and conference sessions had to be abandoned when the university shut down after spring break. In response, the Group hosted 12 Zoom Convening sessions in April that involved 226 participants and provided excellent feedback. In anticipation of the Convening sessions the Group and its subcommittees developed ten creative videos that described the CAC recommendations. See website: https://svpoa.vt.edu/index/VTCACRevision.html
1.4 Roadmap to the 2020 VT CAC Working Group Report

This report is divided into two main parts with a total of eight chapters and two appendices:

**Part I: The Virginia Tech 2020 Climate Action Commitment**
- Chapter 2 presents the 2020 Virginia Tech Climate Action Commitment including goals and detailed pathways to achieve them.
- Chapter 3 explores a range of implications of the 2020 CAC for Virginia Tech including impacts on GHG emissions, budget and finance, operations and staffing, the educational mission, policies and governance, and university culture.
- Chapter 4 discusses implementation of the CAC including major changes in operations and governance, staffing, procedures for annual GHG inventories, engaging the campus community, an annual review report of progress, and a five-year cycle for updating the CAC.
- Chapter 5 focuses on the process and results of our community engagement process.

**Part II: Progress Implementing the 2009 VT CAC and Comparison to Peers**
- Chapters 6 and 7 provide a summary of progress we have made in the eleven years since the 2009 Climate Action Commitment was adopted as well as a critique of that progress.
- Chapter 8 reviews related experience at peer and exemplary universities to see how we stand, steal good ideas, and show that we are not far-fetched with our recommendations.
- Chapter 9 provides a short conclusion and describes a couple dozen initiatives, policies, and projects that are “shovel ready” for immediate action from now to 2022.

*Appendix A* provides information on the Working Group, its charge, its subcommittees, Climate Strike student demands, and the Faculty Senate climate action resolution.

*Appendix B* provides the executive summaries of the 12 subcommittees’ reports.

The full subcommittee reports are given in the separate Volume II report of the Working Group. In addition, a series of slide decks presenting most of the Working Group’s results is available on-line.
2. Virginia Tech 2020 Climate Action Commitment

2.1 Factors, Criteria, and Process for Developing Goals and Pathways

2.1.1 Factors Determining Effective Implementation of VT 2020 Climate Action Commitment

Before considering elements of the VT 2020 Climate Action Commitment, it must be noted that several factors will affect the potential achievement and beneficial consequences of the CAC. Implementation depends on internal commitments and external influences. Successful achievement must consider implications for students, faculty and staff and community.

Among **internal commitments** are those of the VT administration, staff, faculty, students, alumni, and donors. Their commitment will determine the university’s sustainability culture and advocacy, including voices for change as well as behavior that affects sustainability choices. To a major extent the achievement of CAC goals will depend on financial investment from diverse sources including E&G and auxiliary funds, VT Foundation investments, external grants, and private donors. The university community has many funding priorities, especially as it recovers from Covid-19, and the climate commitment must compete with other needs including safety and security, academic excellence, quality student experience, affordable tuition and fees, and competitive faculty salaries.

Among **external influences**, state policy and funding, utility providers’ climate commitments, terms and conditions of utility contracts, as well as federal and international climate commitments will all affect the context in which VT operates. Already 2020 state Governor and General Assembly action is providing mandates and goals that will facilitate VT’s 2020 Climate Action Commitment.

The climate commitment and its implementation must consider not only GHG reduction and cost-effectiveness, but also benefits for VT’s educational mission, culture, and reputation. Moreover, climate actions need to consider **social equity implications** for students, employees, and the larger community. These implications involve sources of energy; upstream and downstream social impacts; student fees; staff wages; affordable options for housing, transportation, and utilities; among others.

2.1.2 Process and Criteria for Developing and Evaluating Climate Action Goals

The Climate Action goals and pathways presented in this chapter are the heart of the matter. They were developed through a process of deliberation in each subcommittee and within the Working Group. A set of preliminary goals and pathways was developed for the Interim Report. They underwent revision through weekly subcommittee discussions and were presented in the 12 Zoom public convening sessions. Based on public comments, the goals and pathways were finalized in the subcommittee reports in summary form (presented in the Executive Summary) and in expanded form (presented below). The process of assessment was generally based on the following set of criteria:

- **Relative contribution expected to reduce greenhouse gas emissions and achieve reduction goals**, and to achieve complementary sustainability objectives.
- **Context** of VT’s mission as a leading institution in education, research and outreach.
- **Resource efficiency** or ‘bang for the buck’, acknowledging that we seek to achieve as much as possible in a resource constrained environment.
- **Ease of implementation**, given legal, institutional, political, and other constraints.
- **Palatability to the VT community** with the goal of fostering broad support for actions to ease implementation and minimize barriers.
- **Wider societal social justice** implications (positive and negative) associated with adoption and implementation.
2.2 Virginia Tech 2020 Climate Action Commitment

2.2.1 Climate Action Commitment Vision and Mission

**Vision** of the Virginia Tech 2020 Climate Action Commitment:

*In the spirit of Ut Prosim, Virginia Tech will be a leader in climate action in service to our community, the Commonwealth, and the world.*

**Mission** of the Virginia Tech 2020 Climate Action Commitment:

*President Tim Sands: “climate change presents one of the world’s most pressing problems...and Virginia Tech has a duty to respond.”*

*The mission of the Virginia Tech 2020 Climate Action Commitment is to achieve carbon neutrality by changing our physical infrastructure, collective and individual behaviors, and educational mission; to engage everyone in creating a culture of sustainability; and to achieve these objectives through just and equitable means.*

2.2.2 Virginia Tech 2020 CAC Expanded Goals and Pathways

The Executive Summary presented summary goals and pathways. This section provides more detailed information on the CAC goals and potential pathways to achieve them.

**The 15 primary CAC goals:**

1. Carbon neutral Virginia Tech campus by 2030  
2. 100% renewable electricity by 2030  
3. Complete the total conversion of steam plant fuel to natural gas by 2025, plan for a full transition to renewable steam plant fuel after 2025, and continue to improve the efficiency of campus energy systems  
4. Reduce building energy consumption to enable carbon neutrality by 2030  
5. Operations of new buildings initiated by 2030 will be carbon neutral  
6. Agricultural, forestry, and land use operations will be carbon neutral by 2030  
7. Virginia Tech to become a Zero-Waste Campus by 2030  
8. Establish the Sustainable Procurement Policy and Procedures by 2022  
9. Reduce single-occupancy-vehicle commuting to campus by 20% by 2025 and reduce transportation-related GHG emissions by 40% by 2030  
10. Integrate the CAC into Virginia Tech’s educational mission through the Climate Action Living Laboratory beginning in 2021  
11. Establish climate justice as a core value of the VT Climate Action Commitment  
12. Diminish barriers to sustainable behaviors through institutional change, education and social marketing  
13. Implement the VT Climate Action Commitment at a high level of university administration and governance, by integrating goals for facilities, education, and campus culture, and with stakeholder engagement for evaluation of goals and progress  
14. Develop innovative budgeting and financing mechanisms to generate funding and staffing to achieve Climate Action Commitment goals  
15. Develop Pathways after 2030 to eliminate fossil fuels and carbon offsets by 2050
Expanded Goals and Pathways

The Working Group and subcommittees devoted significant attention to deliberating around not just what the updated CAC goals should be, but how they can be implemented in practice. This section further expands upon the goals outlined above and provides potential pathways.

Goal 1: Carbon Neutral Virginia Tech Campus by 2030

Carbon neutral is defined as net-zero emissions of CO₂, CH₄, and N₂O by VT operations on the Blacksburg campus based on the geographic and GHG scope of the 2020 CAC update.

The geographic scope includes all Virginia Tech owned lands and buildings on the main campus, buildings leased by university departments in Blacksburg, and agricultural/forestry operations and lands in the Blacksburg region.

The GHG scope includes:
- **Scope 1** emissions from campus fuel use and fugitive sources,
- **Scope 2** emissions related to purchased electricity (generation CO₂ and N₂O, transmission/distribution losses), and
- Some **Scope 3** emissions related to campus behavior (commuter driving, transit bus fuel, waste/recycling/compost, water/wastewater, aviation fuel, and commercial business travel).

Other GHG Scope 3 emissions are not included in 2030 carbon neutral goal, but will be monitored as part of the annual GHG inventory. These include estimates of upstream leakage from natural gas extraction/distribution, upstream emissions from the production/transport of dining hall food, and possibly other sources. By 2025, reduction targets will be established for these emissions as data sources are improved.

Emissions from other Virginia Tech locations across the state and in other countries are not included in the 2030 carbon neutral goal. By 2025, GHG inventory methods for the 2020 VT CAC should be applied to other VT operations in the Commonwealth, and each should establish GHG reduction targets, goals and pathways.

Potential Pathways:

1a. Goal 2—**100% renewable electricity** by 2030—can reduce emissions by 50% below 2019

1b. Goal 3—in the steam plant **total conversion to natural gas use by 2025 and transition to some renewable fuel by 2030**—can reduce GHG by at least 10% below 2019

1c. Goals 4 & 5—**reduction of energy use** in existing and new buildings—can result in further emissions reductions of 10% despite campus growth.

1d. Goals 6, 7, & 8—**reductions in GHG emissions from waste/recycling, transportation, and agriculture**, forestry, and land use—can reduce emissions by 10%.

1e. In 2030, remaining emissions can be negated by **carbon offsets**.
   - Most universities use carbon offsets to reduce their GHG emissions and approach carbon neutrality.
   - Purchase of carbon offsets can be costly. Current offset prices are $5-12/MT (metric ton) CO₂e. Carbon offsets to cover 2020 VT CAC GHG emissions of about 300,000 MT would be $1.5-3.6 million.
• There are better uses for this money, so every effort should be made to avoid the need for offsets by investing in energy efficiency and renewable energy. This investment not only reduces emissions and the need for offsets, but also provides long-term financial benefits.

**Figure 2.1. Carbon Neutral by 2030.** 2009 CAC GHG reduction goal (green line); actual GHG reduction progress (solid red line); needed reduction for carbon neutral by 2030 (dashed red line)

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**Goal 2: 100% Renewable Electricity by 2030**

Virginia Tech is in the unique position of having its own electric utility - Virginia Tech Electric Service (VTES) - which dates back to the 1890s when it made Blacksburg the first town in SWVA with electric power, and the steam and power plant became the instructional tools for electrical and mechanical engineering departments.

Virginia Tech can achieve 100% renewable electricity through a combination of:

- Solar energy projects on campus building rooftops and VT lands. These can be VT owned or 3rd party owned with a VT power purchase agreement.
- Power purchase agreements (PPA) with utility or 3rd party-owned projects in Southwest Virginia
- Other PPAs or virtual PPAs.
- Appalachian Power increasing renewable portfolio, which is now 10% and by new state law must be 14% by 2025 and 30% by 2030.
- Renewable energy certificates (RECs) or purchased MWh credits from utility or 3rd parties.

Achieving 100% renewable electricity by 2030 assumes 60% VT owned or purchased renewable generation, plus 30% APCO renewable portfolio and 10% RECs to cover steam plant cogeneration. 60% generation requires 145 MW of solar capacity to serve campus (95 MW) and town customers (50 MW).

The pathways assume a combination of solar on VT buildings and land (15 MW), 3rd party owned PPA, and APCO owned SWVA PPA capacity (130 MW), for total 15 MW+130 MW = 145 MW. Capital costs of VT owned solar systems are assumed to be $2/W for <0.5 MW projects and $1.50/W for >1MW projects.
Total capital cost for 15 MW on VT buildings/lands would be about $25-30 million.
Total capital cost for 145 MW would be over $200 million.
Best PPA contract rates on the market are 20-year, non-escalating ~7¢/kWh.

While utility/3rd party PPAs are assumed to be the preferred approach for off campus solar projects, on-campus projects can be either VT-owned or utility/3rd party owned with PPAs.

- The advantages of VT owned and managed renewable systems are greater control and possible greater long-term financial return; and disadvantages are high initial capital investment and ongoing operation/maintenance/decommissioning requirements.
- The advantages of PPAs are little or no initial capital costs and no operation/maintenance cost; and disadvantages are potentially higher electricity costs and less operational control.

Potential pathways (including timelines and different options):

2a. 2020: achieve 30% renewable electricity via purchase 20% renewable energy certificates (RECs) from APCO + APCO 10% renewable portfolio

2b. 2020-22: 2.35 MW on VT bldgs/land including “showcase” solar array perhaps on Old Southgate
   - Option 1: VT finance and own: 2.3 MW @ $2/W=$4.6 million
   - Option 2: 3rd party PPA: no upfront cost, pay per kWh; 25-year contract, 5 year buyback option
   - Option 3: Sterrett 0.33 MW and 2nd building 0.67 MW through 3rd party PPA, learn from experience then VT finance and own remaining 1.3 MW ($2.6 million)

2c. Beginning 2021: Incorporate campus and region VT renewable electricity development by Virginia Tech Electric Service (VTES) into VT educational mission through Climate Action Living Laboratory with faculty, student, and staff instructional, research, and outreach opportunities.

2d. 2021: assess VT Fishburn Forest atop Price Mountain and other sites for cost-effective wind energy; engage students/faculty and partner with JMU to conduct a wind study.

2e. 2022-27: Continue to work with APCo to be a primary customer of their renewable capacity as they develop it to meet state requirements. APCO just completed an RfP solicitation for 250 MW of renewables in March and as this capacity is developed, VTES could contract for the output. Under the Virginia Clean Economy Act, APCO is required to achieve a 14% renewable portfolio by 2025, 20% by 2027, 30% by 2030, 65% by 2049, and 100% by 2050.

2f. 2022: VTES Solarize program to add 0.25 MW net-metered solar for town customers, doubling VTES current distributed capacity. Customers cover cost but VTES could facilitate/incentivize customers. RECs owned by customer, but VTES could buy their RECs.

2g. 2023: 0.5-1.0 MW community solar for VTES customers, possibly located on airport land off of Hubbard Dr. VTES would own RECs.
   - Customers buy shares in 100 kWh blocks for $10/block (10¢/kWh) for 20 years.
   - Production 500 kW = 500 kW*1,314 kWh/yr/kW = 670,000 kWh/yr (6,700 shares)
   - Revenue = $67,000/yr * 20 yr = $1.34 million (present value = $1 million, 20 yr, 3%)
   - Capital cost: 500 kW * $2/W = $1 million

2h. 2025: add 10 MW solar capacity on campus and on VT land in region in cooperation with APCo (still within 2027 contract). Use solar installations at Kentland Farm and Catawba Sustainability Center to study “agrivoltaics,” or agricultural production on solar farms. 10 MW @ 6 ac/MW= 60 ac.
• Option 1: VT finance and own: 10 MW@ $1.50/W = $15 million
• Option 2: 3rd party PPA: no upfront cost, pay per kWh; 25-year contract, 5 year buyback option

2i. By 2027 (APCo contract renewal date), 50% renewable electricity via campus and VT land capacity (12 MW), APCo power purchase agreements (PPA) in southwest Virginia (including reclaimed mine land) (35 MW), APCo renewable portfolio (20%), and virtual PPA (VPPA) and/or RECs (10%) (e.g., 20% production (47 MW)) + 20% APCo portfolio + 10% purchased PPA/VPPA/RECs

2j. By 2027 or earlier, add 10 MW energy storage to campus renewable capacity and use VTES as a testbed and showcase for innovative VT Smart Grid reliability and resilience research through a partnership between VTES and the VT ECE Power & Energy Center (PEC) using shared SCADA data and in collaboration with APCo for research and testing in real-life scenarios.

2k. By 2029 add 100 MW solar capacity via campus and VT land capacity (+3 MW, total 15 MW) and PPA with APCo and/or 3rd party in southwest Virginia (+95 MW, total 130 MW).

2l. By 2030, 100% renewable electricity with 60% renewable production (VT solar (15 MW) and APCo+3rd party PPA in southwest Virginia (130 MW), total 145 MW to serve campus (95 MW) and town customers (50 MW), 30% APCo renewable portfolio, and 10% VPPA and/or RECs

2m. As with all components of this CAC, full lifecycle analysis should include the environmental and social justice costs and benefits of procured systems, including sources and decommissioning of photovoltaic systems, requiring end-of-life recycling.

2n. Siting renewable energy systems should employ best practices of public engagement to identify most appropriate sites considering compatible uses and economic, environmental, social effects

2o. VT should work closely with VDMME (Virginia Department of Mines, Minerals, and Energy) to take advantage of state grant programs and compliance for agencies and universities in response to the Governor’s Executive Order 43 and 2020 legislation

Figure 2.2. 100% Renewable Electricity by 2030. Shows pathway to 2030 with VT Solar on Campus (15 MW) + PPA in SWVA (130 MW) for 60%, APCO renewable portfolio for 30%, RECs for 10%
Goal 3. Complete the total conversion of steam plant fuel to natural gas by 2025, plan for a full transition to renewable steam plant fuel after 2025, and continue to improve the efficiency of campus energy systems

The 2015 natural gas pipeline enabled the steam plant to drop from 97% reliance on coal fuel in 2009 to 7% in 2019. With the addition of gas boiler #12, we will have the natural gas thermal capacity to meet all steam plant demand.

For reliability and resilience in total conversion to natural gas, the steam plant will need:

- **Backup fuel** (such as liquefied natural gas (LNG), biochar, or other fuel) when natural gas is unavailable or the market is tight, and
- **Boiler redundancy** (so-called “n+1”) in case of a boiler outage at a critical time. Converting a coal boiler to biochar or natural gas could provide this.
- Scheduled upgrades to the steam plant to provide resilience and reliability will incur necessary costs of doing business. Total conversion to natural gas reducing GHG emissions will be incorporated into those plans with limited increases in net costs.

VT’s natural gas service contract will be renewed summer 2020 and the new contract will determine the conditions and need for backup, price terms, and possibility of some renewable gas.

*Figure 2-3. Total conversion to natural gas in steam plant is nearly complete*
From 2009-10 to 2019-20, natural gas from 3% to 93% of steam plant fuel

**Potential pathways:**

3a. **Improve chiller efficiency:**
- By 2023 the Chiller Plant Phase II project will reduce 2020 central chiller energy usage by 20%.
- Future campus growth needs for chilled water will be met from central plants where possible.

3b. By 2022, develop a **plan for total conversion to natural gas while providing resilience backup fuel** in cold weather or interrupted natural gas supply. The backup fuel need will be affected by the terms of the 2020 natural gas contract. Options include:
- Liquefied natural gas (LNG) with storage at Old Southgate site where it can be tapped into the existing pipeline (cost ~$1 million) or better yet at the steam plant if coal storage and baghouse emission control can be removed.
• Renewable fuels, such as biogas and biochar, which is currently being applied to institutional uses in Virginia and Maryland.

3c. By 2022, develop a plan for boiler n+1 resilience backup, dependent on decision for back-up fuel

3d. Continue to explore options for renewable gas from service provider’s contract as a means to reduce natural gas emissions and/or offset natural gas electricity from the steam plant cogeneration

3e. As part of the Climate Action Living Laboratory (CALL), engage faculty and students to develop an online Energy Dashboard for users to obtain and analyze energy use data for campus facilities

3f. Beginning with the CAC 2025 update, develop a plan for full transition to renewable energy for campus heating systems. To promote zero emissions energy options in the plan, refine GHG inventory estimates of methane leakage from VT natural gas sources and include those estimates of methane leakage in the carbon neutral goal for 2035.

• Explore geothermal and ground source heat pump systems and other non-fossil-fuel options for heating new districts of campus.
• New districts being considered on campus should evaluate hot water rather than steam heating systems. Understanding the extreme cost of extending steam tunnels, hot water systems sourced by the existing steam loop are already being explored for new districts.
• Conversion of steam to hot water central heating systems is being considered at other universities and offers the prospect of efficient geothermal and ground source heat pump heating and cooling systems in conjunction with renewable electricity.

Goal 4. Reduce Building Energy Consumption to Enable Carbon Neutrality By 2030

4.1. By the end of 2022 reduce electricity consumption (kWh) by 10% and electricity intensity (kWh/gsf) by 20% below 2006 levels

• This subgoal reflects the Governor’s E.O 43, which requires that state agencies reduce their electricity consumption to 10% below 2006 levels by 2022.
• From 2006 to 2019 the campus gross square feet (gsf) grew by 22% and electricity consumption grew by only 9% due to energy improvements, so electricity intensity (kWh/gsf) dropped by 14%
• To achieve this subgoal electricity consumption needs to be reduced by 15% from 2019 by the end of 2022, which will be a challenge. We are on track to achieve the electricity intensity subgoal.
• Means to achieve the 2022 subgoal include the current chiller upgrade (see Goal 3 pathway), this last year of the current 5-year energy plan, an aggressive start to the proposed 2021-30 energy plan, and energy conservation/demand response.

4.2. By 2030 employ energy management retrofit to reduce total energy consumption (Btu+kWh) in all buildings by 10% and EUI (Btu+kWh/gsf) by 20% below 2020.

• All buildings include campus academic (E&G) buildings (5.36 million ft²), auxiliary buildings (e.g., dining and residence halls, athletics, 4.35 million ft²), and off-campus buildings leased for VT operations (CAC geographic footprint includes 47 leased properties, 1.45 million ft², 70% owned by VT Foundation).
Energy efficiency retrofits in the 2015-2020 Energy Management Plan have reduced energy use in academic buildings financed with E&G funds. Other means of financing are needed for energy retrofits in auxiliary buildings and leased buildings.

Potential pathways:

4a. An aggressive 2021-30 10-year energy management plan updated annually can reduce total energy consumption in all buildings by 10% below 2020 levels. Auxiliary buildings need to be included, financed with internal funds or external energy performance contracting. Identified opportunities for 2021-30 energy management strategies include:
   - Energy audits;
   - Retrofit lighting, equipment replacement;
   - Re-commissioning of lighting and mechanical systems;
   - Optimizing chilled water plants,
   - Studies and pilot projects for HVAC, lighting, and renewable energy; and
   - Electricity demand management.

4b. For buildings leased for VT department use, special arrangements are needed to finance efficiency retrofits and reduce emissions. Most leased space is owned by the VT Foundation. The Foundation can invest in efficiency improvements in its buildings, and has indicated an interest in doing this on a revenue neutral basis, starting with a pilot program.

4c. Building energy and GHG emissions can be reduced by smart operations, such as demand response, digital controls, thermostat settings, occupant behavior, and innovative space scheduling especially in summer.

4d. As part of the Climate Action Living Laboratory (CALL),
   - Engage faculty and students to develop an on-line Energy Dashboard for users to obtain and analyze energy use data for campus facilities. Dashboard kiosks in high-traffic individual buildings can raise campus awareness of energy and GHG emissions.
   - By 2021, use a showcase and test-bed Green Lab to pilot a campus-wide Green Lab program to better design and manage research labs, our most energy-intensive buildings, with a goal of Green Lab certification of 80% of science and engineering labs by 2025.

4e. In addition to project funding, achieving these goals will require sufficient staffing in energy management.

Goal 5. Operations of new buildings initiated by 2030 will be Carbon Neutral

5.1 New building efficiency will conform to the latest adopted LEED-Silver standards and ASHRAE 90.1 energy performance standards + 10%
   - The 2009/13 VT CAC called for new buildings to achieve LEED-Silver standard and exceed ASHRAE 90.1 energy performance standard by 10%. Since 2009, both LEED and ASHRAE standards have been upgraded significantly and far exceed their 2009 levels of efficiency. ASHRAE 90.1-2019 standards produce 37% energy savings compared to their 2004 standards.
   - ASHRAE standards are upgraded every three years and LEED standards have aligned themselves closely to ASHRAE standards over the years. To be even considered for LEED v.4-Silver buildings must exceed ASHRAE by 5%; and to achieve half of the available energy
points, it must exceed it by 22%. Since LEED-Silver can be achieved without exceeding ASHRAE by more than 5%, our goal is to continue exceeding ASHRAE by 10%.

- Following **accepted industry-standards**, such as ASHRAE and LEED, align efficiency goals with building design and construction contracting, and ultimately improves implementation.
- ASHRAE also develops and upgrades a “stretch” standard 189.1, including guidelines for high performance green buildings, which can be used to inform VT design guidelines.

### 5.2 By 2022, reduce total energy use intensity (EUI) in newly initiated buildings by 20% compared to 2020 existing buildings.

- This interim sub-goal is intended to be applied as a benchmark for new building stock rather than a design tool for individual buildings. It can help **jump-start new-building energy analysis** and improvements. It will likely be easy to achieve, but the analytical exercise will be useful for Facilities staff training.
- Each project should determine the design EUI and then evaluate the actual EUI over time using metered data.

### 5.3 By 2026, build a signature zero-net-energy (ZNE) building on campus as a showcase and learning model.

- A **zero-net-energy (ZNE) building** has high energy efficiency and reduced annual consumption that can be supplied (offset) with site-produced renewable energy. Such a building still uses some conventional energy but balances that consumption with on-site net-metered solar electricity generation on an annual basis.
- A ZNE building on campus can serve as a **showcase for Virginia Tech leadership** and as an **educational model** for the Climate Action Living Laboratory. Virginia Tech has received international recognition for its ZNE design innovation through Solar Decathlon competitions.

### 5.4. By 2028, newly initiated building efficiency improvements will reduce total energy use intensity (EUI) in new buildings by 40% compared to 2020 existing buildings

- Like subgoal 5.2 this is intended to be a benchmark for new building stock rather than a design tool. Following continually revised **ASHRAE 90.1 and LEED-Silver** building energy standards, efficiency improvements can bring down total energy intensity in new construction by 40% by 2030 while providing necessary building performance.
- Each project should determine the design EUI and then evaluate the actual EUI over time using metered data.

**Potential pathways:**

#### 5a. Electricity currently contributes 50% of total CO2 emissions. 100% renewable electricity by 2030 will reduce new building CO2 emissions by 50%.

#### 5b. In 2020, identify candidate new building projects/needs for a **showcase ZNE building** and begin fundraising to attract donors to help fund the project.

#### 5c. By 2030, all newly initiated construction will be **carbon neutral** through 100% renewable electricity, reduced energy consumption, on-site solar energy production, and carbon offsets.

#### 5d. Capital budgets need to reflect these goals and incorporate the value of life-cycle energy and GHG savings.
5e. Post-occupancy evaluation (POE) should become standard practice to assess building operations to reduce energy & emissions, better serve users, and establish better thermal comfort set-points.

5f. As part of the Climate Action Living Laboratory new building budgets or supplements should include project design and operation elements, such as metering, that offer opportunities for research and instruction by faculty and students through use of emerging technologies, monitoring energy use, air quality, and occupant perceptions, and other projects.

5g. Achieving these goals will require sufficient engineering and design staffing.

Goal 6. Agricultural, forestry, and land use operations will be carbon neutral by 2030

Virginia Tech owns and manages considerable land area in the Blacksburg region and throughout the Commonwealth. In addition to main campus, VT owns and manages 3,500 acres of agricultural lands including the 950-acre Kentland Farm. In addition, there are about 1,300 acres of VT forested land in the area including the 1,150-acre Fishburn Forest on Price Mountain. The 377-acre Catawba Sustainability Center in Roanoke County is also part of our inventory.

Campus trees, including several old growth stands like Stadium Woods, play an important role in the campus environment with many benefits. Canopy cover is 16%.

Campus lands play an historic and important part of the university’s educational programs especially in agriculture and forestry, as well as the natural and physical sciences, engineering, and other disciplines. Incorporating these lands and operations in the Climate Action Commitment can enhance our Climate Action Living Laboratory.

Agricultural and forestry operations GHG emissions were not included in 2009/2013 CAC but are part of the 2020 VT CAC GHG inventory.

- In 2019 emissions totaled 11,297 MT CO₂e and came from animal enteric fermentation CH₄ (58%, 45% from dairy cows), manure management CH₄ (31%), land application of manure and fertilizer N₂O (6.5%), and equipment and vehicle fuel and electricity CO₂ (4.8%).
- Conservation tillage in VT cropland sequesters an estimated 1,271 MT and VT forested land has carbon sequestration benefit of 1,980 that is documented. Total net A/F/LU GHG emissions in 2019 are 8,046 MT CO₂e or about 3.3% of 2019 VT GHG emissions.

Animal enteric fermentation emissions amount to 58% of total agriculture emissions and about 3% of total VT GHG. Animal scientists at Virginia Tech are investigating practices that reduce methane generation, such as increasing ruminant digestion efficiency by adjusting feed rations and provision of dietary additives that reduce metabolism of rumen CH₄-producing bacteria. Such scientific breakthroughs have the potential to reduce CH₄ emissions that currently comprise about 2% of VT GHG emissions.

Manure management CH₄ amounts to 31% of agricultural GHG emissions and 1.5% of total VT GHG. Two options for reducing GHG manure emissions that could be used in combination are composting and anaerobic digestion (AD) to produce usable methane.

- AD of VT livestock manure could produce about 200,000-220,000 m³/year of CH₄ (7 billion Btu). If combusted for heat or a micro-turbine, this would offset the GHG emissions from the estimated 225,000 m³ CH₄ from manure handling or 1.5% of VT GHG.

Composting would reduce GHG emissions not only from manure but also from campus dining hall and other compostable organic waste. The GHG reduction value of composting depends on its landscape application, from 0.036 to 4.58 MTCO₂ per MT compost. Based on an assumed reduction
of 0.42 MT CO$_2$e per MT of food composted, composting the current 550 MT of VT dining hall
food waste would yield reduction of 230 MT CO$_2$e, 0.1% of VT GHG. If compost were applied to
disturbed, marginal soils the estimated reduction could be as high as 1% of VT GHG.

Potential pathways:

6a. Develop the University Compost Facility at Kentland

Developing and operating the University Compost Facility at Kentland will provide significant
benefits in management of campus organic wastes from dining halls, athletics, vet school, and
campus tree trimmings. The Facility will also reduce net animal waste GHG emissions, support
soil health, relieve the need to purchase new land for future land application of animal wastes,
and support sustainable agriculture education and research. Capital cost is estimated at $1.8
million with net operating cost of about $200,000/year.

6b. Adopt a Campus Tree Policy to increase canopy cover from 16% to 25%

VT forest lands can be managed to increase carbon sequestration to offset some of the
agricultural emissions. The current campus canopy cover of 16% can be increased to 25%
through a Campus Tree Policy, which will also offer additional environmental and climate
adaptation benefits.

6c. Reduce GHG emissions through ruminant research and improved efficiency of
agricultural operations

- The source of most VT agriculture/forestry/land use emissions is animal enteric
  fermentation, especially from the dairy herd. Animal emissions of methane are a global
  problem, and animal science research can increase ruminant digestion efficiency via
  adjusting rations, additives that reduce metabolism of rumen CH$_4$-producing bacteria.
- Agricultural and forestry programs can reduce net GHG emissions through the compost facility
  and possibly anaerobic digestion with methane recovery, more efficient operations, improved
  energy and fuel efficiency, agrivoltaics solar production, and other means.

6d. Develop Solar Energy Projects on Virginia Tech Lands

- The 2020 VT CAC goal #2 is 100% renewable electricity by 2030 and it calls for at least 15
  MW of solar capacity on Virginia Tech buildings and lands in the area. Land area on
campus, Kentland Farm, Fishburn Forest, and Catawba Sustainability Center are prime
candidates for solar development. 15 MW would require about 75-100 acres.
- Develop solar farms on VT agricultural land to provide “agrivoltaic” multiple use solar and
  usable grazing/cropland. These agrivoltaic farms would provide unique research and
  educational opportunities, part of the Climate Action Living Laboratory.

6e. Enhance Sustainable Agriculture Education in Climate Action Living Laboratory

- Expand climate sensitive and sustainable agriculture experiential education programs at
  Catawba Sustainability Center and Kentland’s Homefield Farm
- The University Composting Facility at Kentland will provide a living learning laboratory for
  VT students and educational programming for waste management and composting
  professionals from Virginia and nearby states.

6f. In 2030, negate remaining net GHG emissions from agricultural/forestry operations

- In order to achieve zero net GHG emissions by 2030, credits developed by the agriculture
  and forestry sectors via solar agrivoltaic adoption, energy generated from anaerobic
digestion of manure and other wastes, and C sequestration may need to be supplemented by
  purchasing carbon offsets.
Goal 7. Virginia Tech to become a Zero Waste Campus by 2030

As defined by industry, a “Zero Waste Campus” has a 90% or greater Waste Diversion Rate or waste kept out of landfills.

7.1. Increase waste diverted from landfill—including construction waste—to 85% by 2025

For CY 2019, Virginia Tech achieved an 80% waste diversion rate. For the past decade the rate has averaged 70%, with a low of 47% (2016), and a high of 84% (2011, 2012). The waste diversion rate includes recycled/reused construction waste from new construction and major renovations. In a robust construction year, the waste diversion rate will increase significantly. The university owned Quarry is currently producing about 1,000 to 2,000 tons/month of Hokie Stone scrap material or overburden, which is crushed into useful gravel and can be included in diverted waste.

7.2. Increase waste recycling rate to 55% by 2025

For Calendar Year (CY) 2019, Virginia Tech achieved a 39% recycle rate. The recycling rate has remained relatively constant at or near 40% for the past decade.

For CY 2019, Virginia Tech recycled a total of 2,000 tons of principal recyclable materials:
- 750 tons sent to MRSWA at a cost of $25,875 ($34.50 per ton) plus contractor cost for storage containers and collection and transport fees; and
- 566 tons of food waste for composting sent to ROF and of waste cooking oil collected on campus by Valley Protein, at a cost of $84,900 ($150 per ton) plus contractor cost for collection and transport of food waste to the ROF sledge container at Prices Fork Closed Landfill.
- 684 tons sent to a number of other organizations with varying costs

7.3. Reduce waste to landfill per capita by 25% by 2025

For CY 2019, Virginia Tech sent 4,000 tons of municipal solid waste through MRSWA to the NRRA local landfill or 0.1 tons or 200 pounds per capita (students + faculty + staff = 40,000). Goal 7.3 is 150 lb/capita by 2025. The 2019 trash disposal cost was $218,000 ($54.50 per ton) plus contractor cost for storage containers and collection and transport fees.

Pathways to Goals:

7a. To enhance campus waste management, hire a zero-waste consultant to conduct a waste audit study and plan to evaluate current organization, equipment, procedures, and staffing.
- A third-party zero-waste consultant is critically needed to objectively evaluate waste operations for E&G facilities, auxiliaries, and the athletic department to identify opportunities to streamline operations, maximize efficiencies, reduce costs, and recommend measures to achieve zero waste.

7b. Improve Oversight of Waste/Recycling/Compost
- Based on consultant recommendations, improve organization of waste management with one option being the hiring of a waste manager to manage all aspects of campus waste management and forming a Waste/Recycling Council of existing program personnel to coordinate waste management activities to help streamline operations and reduce redundancies.
7c. **Develop University Compost Facility at Kentland** to process campus organic food waste, veterinary and agricultural animal waste, yard trimmings and other compostables.

- For CY 2019, 566 tons of food waste for composting was sent from our 11 dining facilities to Royal Oak Farm (ROF) at a cost of $150 per ton. ROF is the nearest DEQ permitted composting facility. The university continues to produce 600 tons of food waste for composting.
- A University Compost Facility at Kentland would provide composting of not only dining hall waste but also other campus organic wastes from athletics, the vet school, residence halls, and campus tree and brush trimmings, and ultimately community organic waste. The capital cost of the facility is estimated at $1.4-1.8 million with net operating cost of $165,000 per year.

7d. **Engage faculty, students, and staff in the Climate Action Living Laboratory** to promote Pollution Prevention (P2) concepts of reduce/reuse/recycle to achieve principles of Circular Economy. Include P2 and Circular Economy activities in Sustainability Internships, learning living centers, student orientation programs, and recycling/composting programs.

7e. **Promote greater adoption of recycling, composting, and other best practices in waste management** through effective social marketing, social media, incentives, and innovative approaches. Include CAC sustainable choices Goal 12 pathways including web-based and smartphone apps, student clubs, roundtables, 1st year experience app, and campaigns for Y-toss, green tailgating, and related programs.

7f. **Evaluate and improve as needed management of specialty wastes**, such as e-waste, construction debris, laboratory waste, and wastes from major sporting and other events.

- By 2021, use a showcase and test-bed **Green Lab** to pilot a campus-wide Green Lab program to better design and manage waste materials in research labs (see Goal 4 pathways).
- Expand programs for **reuse of materials**, such as Surplus, Hokie-Swap, Y-Toss
- Expand programs for Green Tailgating and related Athletics recycling/compost initiatives

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**Goal 8. Establish the Sustainability Procurement Policy and Procedures by 2022**

In April 2020, the Virginia Tech Procurement Department developed a **Sustainable Procurement Policy** that aims “to make procurement decisions that embody the university’s commitment to sustainability whenever possible.” The Policy reflected the elements of the 2009/2013 VT Climate Action Commitment and Sustainability Plan. This Policy is a significant development by the University in procurement to reflect sustainability principles.

Because the 2009/2013 CAC and plan will be superseded by the 2020 VT CAC, we recommend the new Policy be piloted for two years and then be evaluated by the Energy & Sustainability Committee in 2022 for its conformance with the adopted 2020 VT CAC.

**Potential Pathway:**

8a. On a pilot basis, adopt, implement, and evaluate the 2020 Sustainable Procurement Policy for two years

8b. In 2022, the Energy & Sustainability Committee will assess the pilot project and work with the Procurement Department to formulate the Sustainability Procurement Policy.
Goal 9. Reduce Single-Occupancy Vehicle Commuting To Campus by 20% by 2025 and Reduce Transportation-Related GHG Emissions by 40% by 2030

Virginia Tech transportation-related GHG emissions for 2020 VT CAC include:
- Scope 1 GHG: fuel for fleet vehicles and other campus vehicles, aviation fuel for VT airplanes
- Scope 3 GHG: student, faculty, and staff commuting to campus; Blacksburg Transit (BT) fuel, and business air travel

The 2009 VT CAC&SP did not include BT or business air travel. 2019 transportation GHG emissions under that more limited scope were about 20,000 MT CO₂e, or 8.4% of total VT emissions. About 80% of transportation’s share of emissions were from commuting, 13% from fleet vehicles, and 7% from aviation fuel.

The 2020 CAC addition of Blacksburg Transit fuel adds 3515 MT CO₂e or 1.4% of total VT emissions and business air travel adds 5000-7500 MT CO₂e or 2-3%. Overall, transportation will account for about 12% of total VT emissions in 2020, under the expanded scope.

Since the 2009 VT CAC&SP, Virginia Tech and the Town of Blacksburg have made considerable progress in developing alternative transportation choices, including:
- 50% increase in Blacksburg Transit ridership,
- BT has 9 hybrid-electric buses of its 53-bus fleet; BT has also ordered 5 electric buses
- 32% increase in campus bike racks (since 2013),
- 20 miles of campus shared-use paths,
- Roam NRV bike-share (since 2018 11,000 trips, 28,000 miles).
- Shuttles and bus service to Roanoke and Northern Virginia,
- Car- and ride-share programs, and
- Recognition by Best Workplaces for Commuters every year since 2009 (Best of the Best in 2014) and as a Bicycle Friendly University at bronze level 2012-18 and silver in 2019.

The 2016 Transportation Master Plan calls for further improvements in bike infrastructure and parking management, and the Beyond Boundaries 2047 Campus Plan includes the Infinite Loop to improve mobility and Green Links pedestrian-friendly routes.

However, there are also negative trends:
- Single occupancy vehicle (SOV) commuting increased by 10% from 2014 to 2018,
- There is an oversupply of parking (2000 spaces sit empty on any given day),
- Parking permit prices are cheap and provide no incentive for alternative commuting,
- Student orientation or employee onboarding don’t include education on transportation options,
- VT is one of only a few universities that allow freshman to bring cars to campus, and
- University motor pool vehicles do not use alternative fuels.

Guiding principles in developing goals and pathways:
- Prioritize moving the most people over moving the most cars
- Emphasize safety
- Consider equity issues
- Emphasize collaboration with Town of Blacksburg
- Develop cost-effective solutions

2-15
Potential Pathways to achieving Transportation goals:

9a. Make walking/biking/transit the preferred means of commuting to campus
Use parking policies, alternative transportation programs, campus mobility planning in collaboration with Town of Blacksburg, and Blacksburg Transit (BT) programs to promote and improve the safety and convenience of walking/biking/transit as the preferred means of commuting to campus.

- In 2020, provide better data on student and staff commuting behavior and reasons for that behavior through surveys and other means to monitor progress.
- Promote sustainable mobility choice through good social marketing including social media, parking permit literature, university promotion literature/website, student orientation materials, and other means.
- Follow other Virginia universities in restricting freshman vehicles on campus to help students develop less car-dependent culture and behavior.
- Enhance Blacksburg Transit as a commuting choice through education, marketing, coordinating with other transit, development of the Multi-Modal facility, and other means.
- Upgrade VT’s Bike Friendly University from silver rating to gold.
- Parking demand management:
  - Increase parking permit prices. For employees, implement on a sliding income-scale. Use additional revenue to fund sustainable transportation improvements.
  - Consider moving away from annual and toward automated daily fee parking permits so people have to think about paying for parking every time they drive to campus.

9b. Promote non-commuting work and learning opportunities
- Based on experiences during the Covid-19 pandemic shutdown, promote teleworking, innovative online instruction, video conferencing, compressed workweek schedules, and other means to reduce travel demand.
- Work with Human Resources to identify opportunities and barriers to increasing teleworking.

9c. Improve infrastructure and traffic controls to improve mobility choices and safety
- Improve safety of vehicle, bicycle and pedestrian mobility on campus
  - Reduce the speed limit on all core campus streets to 15 miles per hour.
  - Improve lighting on walking and bicycle paths
  - Limit/restrict vehicles in the core of campus by gating streets at strategic locations (Drillfield Drive, Alumni Mall, Kent Street, West Campus Drive, and Stanger Street).
- Implement infrastructure recommendations in the Parking & Transportation Master Plan and Beyond Boundaries 2047: The Campus Plan.
  - Infinite Loop, Green Links, Expand Bike Lanes on Kent Street and Washington Street
  - Multi-modal Facility
- Coordinate with Town of Blacksburg transportation and corridor plans to improve connectivity between campus and town.

9d. Improve vehicle efficiency and promote low-carbon emissions vehicles
- Require University fleet vehicle purchases and encourage Blacksburg Transit to emphasize fuel efficiency, through zero-emission, hybrid, and electric vehicles.
- Although transportation emissions per vehicle-mile will naturally decline with improved vehicle efficiency and increased electric vehicle ownership, changes in commuting mode are necessary to achieve GHG reduction goals and a more livable and less car-oriented campus.
- Support electric vehicle use by installing a mix of charging station types in parking garages, at Fleet Services, and at other locations.
9e. Promote social equity in mobility and parking policy
  ● Develop effective and efficient commuting options for lower-wage employees who cannot afford to live in Blacksburg, including vanpools, park & ride, and other means.
  ● Implement sliding income-scale pricing for parking permits.
  ● Collaborate with the Town to provide affordable workforce housing proximate to campus.
  ● Build more residence halls on campus to free up more off-campus housing for staff.

9f. Reduce and negate business travel GHG emissions
  ● Encourage car sharing and transit use for business travel.
  ● By 2030, negate business airline travel emission with carbon offsets.

9g. Establish an Alternative Mobility Subcommittee of the Transportation and Parking Committee to recommend strategies to increase non-SOV mode share on campus.

Goal 10. Integrate the CAC into Virginia Tech’s Educational Mission through the Climate Action Living Laboratory (CALL) beginning in 2021

The 2009/2013 VT Climate Action Commitment and Sustainability Plan highlighted sustainability related academic programs in goal #9. And Virginia Tech has scored well in the academic categories in AASHE’s STARS rating system, scoring 90% of available points for undergraduate, graduate and research programs.

Since the 2009 VTCAC&SP, the Sustainability Office has implemented the Sustainability Internship program, whose interns work on campus projects and studies, and the Green RfP program for student initiated sustainability projects on campus, which the University Budget & Finance Office has funded with $1 million over ten years.

Although climate action and sustainability are addressed well in several academic departments, few of them rely on the campus as a learning laboratory. The VT 2020 CAC goals and pathways offer great opportunities for student learning, faculty and student technical research, and staff development. Benefits include learning from and innovating creative solutions in-house for VT’s climate initiatives and better engaging the entire university both in Blacksburg and other Virginia Tech locations in our quest for sustainable climate action.

Potential Pathways:

10a. Establish the Climate Action Living Laboratory (CALL) in the new University Office for Climate Action & Sustainability (OCAS) (see Goal 13) to enhance offerings and build bridges between facilities and academic departments, facilitating and supporting opportunities.

10b. Alter norms and incentives to overcome traditional barriers and nurture cooperation between academic units (research and teaching) and operations units like Facilities and auxiliary units like dining and residence and athletics. Greater collaboration between university units will support the implementation of the CAC and integrate physical plant climate action with academics and campus life.

10c. Implement Climate Action Living Laboratory initiatives in other goals/pathways:
  ● Goal 2: Renewables - Incorporate campus and region VT renewable electricity development by Virginia Tech Electric Service (VTES) into VT educational mission through Virginia Tech
Living Learning Campus with faculty, student, and staff instructional, research, and outreach opportunities.

- **Goal 3: Energy** - Engage faculty and students to work with staff to develop an online **Energy Dashboard** for users to obtain and analyze energy use data for campus facilities
- **Goals 4, 5: Buildings** - As part of the **Campus Living Learning Laboratory**:
  - Provide building energy/emissions/solar production data through **energy dashboard kiosks** in high-traffic buildings to raise campus awareness of climate action.
  - By 2021, use a showcase and test-bed **Green Lab** to pilot a campus-wide Green Lab program as part of the national movement to better design and manage research labs, our most energy-intensive buildings.
- **Goal 6: Agriculture/Forestry/Land Use** - Sustainable Agriculture Educational Programs
  - Expand climate sensitive and sustainable agriculture experiential education programs at Catawba Sustainability Center and Kentland’s Homefield Farm
  - The University Composting Facility at Kentland will provide a living learning laboratory for VT students and educational programming for waste management and composting professionals from Virginia and nearby states.
- **Goal 7: Waste/Recycling/Compost** - Engage faculty, students, and staff to promote Pollution Prevention (P2) concepts of reduce/reuse/recycle to achieve principles of Circular Economy, including activities in Sustainability Internships, living learning centers, student orientation programs, and recycling/composting programs.
- **Goal 11, 12, 13: Climate Justice, Sustainable Choices, and Community Engagement** - Engage faculty and students in social science studies and research related to sustainable behavior, justice issues, and involving the campus community in climate action.

10e. The university’s **land grant Extension and Outreach programs** must also be engaged to reflect the principles of the CAC and help implement them throughout the Commonwealth.

10f. Integrating the physical infrastructure elements of the CAC into the fabric of the university’s educational and research programs offers **funding opportunities for campus innovation** from foundation and state and federal sources.
Goal 11. Establish climate justice as a core value of the Climate Action Commitment

- Harlan, et al. (2015) defines climate justice in four parts:
  - Sharing benefits and burdens of climate action equitably
  - Engaging marginalized groups as participants in the climate action process
  - Maximizing opportunities in climate action for marginalized groups to survive and thrive
  - Repairing historic harms against marginalized groups in developing climate action

- The Governor’s 2019 E.O. 43 and the 2020 Clean Economy Act require clean energy and climate goals be achieved in a just manner that advances energy- and social-equity and environmental justice.

Potential Pathways:

11a. Encourage an accelerated transition to carbon-neutral status as a climate-justice imperative.
   - Assess the viability of renewable energy sources, such as geothermal, solar, and wind, for heating and cooling new buildings constructed on Virginia Tech’s campus.
   - Seek opportunities to transition the steam plant’s primary fuel source away from natural gas to renewable energy sources.

11b. Ensure that the social impacts of Virginia Tech’s climate mitigation choices (e.g. energy, land use, and waste) are identified and addressed to the greatest extent possible.
   - Consider the lifecycle impacts of all renewable energy procured systems to ensure they are sourced ethically and sustainably, manufactured with high standards for worker safety, and include a decommissioning plan for responsible, end-of-useful-life recycling.
   - For example, solar photovoltaic manufacturers should receive a score of 80 or higher on the Silicon Valley Toxics Coalition’s annual Solar Scorecard. (http://www.solarscorecard.com/)

11c. By 2021 establish a Climate Justice Subcommittee to the revised Climate Action, Sustainability, and Energy (CASE) Committee with representation from students, faculty, staff, and community members possibly from frontline groups.

11d. Ensure that VT climate action strategies recognize and assist vulnerable and frontline groups adversely affected by those plans
   - Groups potentially affected by VT CAC plans include low-wage VT employees, tuition-paying students, VTES town-resident customers, historically marginalized people of color and Indigenous communities, coalfield communities, and others.
     - Low-wage employees who cannot afford to live in Blacksburg should have access to affordable commuting options with low climate impact and local work-force housing.
     - VT CAC implementation should identify ways to mitigate potential increases in electricity costs for low-income VTES town customers and increases in tuition and fees for low-income students, should such increases result from the University’s climate-action commitment.
     - VT CAC renewable energy development should work with coalfield communities to establish locations for utility- or 3rd party owned solar farms for VT power purchase agreements.
   - Establish education, research, and outreach programs to assist vulnerable and historically marginalized groups in their efforts to mitigate and adapt to climate change and thrive in the new energy economy. These efforts should specifically target Virginia Tribes, African Americans in the New River Valley, coalfield communities in southwest Virginia, and coastal Virginia communities threatened by climate-related hazards.
Goal 12. Diminish Barriers to Sustainable Behaviors through Institutional Change, Education and Social Marketing

Most of the goals of this Climate Action Commitment deal with physical strategies for improving the efficiency of buildings and energy systems, replacing coal, adding renewable energy, building a compost system and mobility infrastructure. But becoming carbon neutral also depends on what people do, how much they recycle and compost, turn off the lights, bike to campus instead of drive, make choices that reduce GHG emissions. The extent to which our students, faculty and staff make sustainable choices that define our culture will say more about who we are and our commitment to climate action than the physical changes we make.

We intentionally include in our CAC GHG emissions inventory, against which we have set the carbon neutral by 2030 goal, those scope 3 sources that relate to people’s behaviors: waste and water, commuting, and business travel. Sustainable choices are about structuring institutions and infrastructure to facilitate sustainable individual behaviors. By leveraging structural changes, incentives, disincentives, educational programs, and games and other innovative tools, these choices can and must be made much easier, cheaper, safer, and more enjoyable. The sustainable choices goal and pathways focus on how university units can ‘nudge’ community members towards adopting behaviors that will reduce our greenhouse gas emissions and create a more sustainable campus culture.

Potential Pathways:

12a. Identify structural, social and institutional barriers to sustainable behaviors

12b. Implement infrastructural changes—from waste management to transportation to building operation—to make sustainable choices easier

12c. Develop educational programs to foster pro-environmental behavior change
   - Educate first-year students about sustainability and sustainable choices, beginning with campus tours and orientation and continuing through First Year Experience
   - Find innovative ways to include learning-based opportunities for student climate action, awareness, and engagement.
   - Support creative ways to integrate behavior change with research and educational programming, working through the proposed Climate Action Living Laboratory (CALL)

12d. Design and implement choice architecture or “nudges” to promote sustainable behavior, while allowing for individual choice

12e. Develop a shared toolkit of best practices in social marketing, rooted in behavioral sciences, for campus groups initiating sustainability initiatives

12f. Nurture cross-campus partnerships to coordinate climate action and enhance sustainability initiatives
   - Create a structuring sustainable choices subcommittee of the new Climate Action, Energy, and Sustainability (CASE) committee (currently E&SC)
   - Partner with Experience VT and Sustainability Managers to integrate sustainability into the new Experience VT app.
   - Craft an ongoing university survey that enables university departments to submit their own university sustainability goals, aspirations, and current infrastructure challenges that may prevent their goals/aspirations from being achieved.
Goal 13. Implement the VT Climate Action Commitment
• at a high level of university administration and governance;
• by integrating CAC goals for facilities, education, and campus culture;
• with stakeholder engagement for evaluation of goals and progress.

Over the past decade, commitments at both the policy and operational levels have led to substantial progress on climate action and sustainability. However, the comprehensive nature of the VT 2020 CAC necessitates a broader approach than current policy and governance arrangements allow. Currently, the Office of Sustainability (OS) in the Division of Campus Planning, Infrastructure, and Facilities (DCPIF) has primary responsibility for injecting sustainability principles into operations and the Energy & Sustainability Committee (E&SC) is the primary governance unit responsible for proposing policy changes in the areas of environment, energy, and sustainability.

Both are positioned in the Facilities world, with the OS reporting to the Chief of Staff to the Chief Facilities Officer and the E&SC reporting to the Commission on University Support (CUS). Facilities continues to be a critical component of the VT 2020 CAC; goals 1-5, 7, 9 & 15 are the most important actions proposed to reduce VT's GHG emissions and are all dependent on initiatives to be taken by Facilities departments. The DCPIF must play a critical role in CAC implementation.

However, the 2020 CAC goals go farther than the physical plant to address the university’s educational mission, campus culture, social equity and justice, and engagement of all university departments, faculty, staff and students. Both the OS and the E&SC units have, in practice, engaged broader perspectives than Facilities; for example, with a limited staff the OS has operated effective student internship and student-initiated Green RfP programs, and the E&SC has a diverse membership of faculty, students, and Facilities staff. However, efforts to elevate sustainability, energy, and climate planning must be truly university-wide if the ambitious 2020 CAC goals are to be met.

This goal and the pathways laid out below suggest operational and governance structures that can elevate the university’s commitment and better reflect the comprehensive nature of the 2020 CAC.

Potential Pathways:

13a. Governance: Restructure the Energy and Sustainability Committee (E&SC)
• Rename the E&SC the Climate Action, Sustainability, and Energy (CASE) Committee
• Revise the reporting lines of the CASE committee to include, in addition to the Commission on University Support (CUS), relevant commissions for student life, academics, faculty and staff.
• Modify the membership of the new CASE committee to include additional representation of the DPCPIF, the Provost’s Office, Student Affairs, student life, student environmental organizations, and vulnerable frontline communities.
• Create CASE subcommittees (SC) that may include: CAC Implementation SC, GHG Inventory SC, Climate Action Living Laboratory (CALL) SC, Climate Justice SC, Engagement & Sustainable Choices SC, Education & Student Involvement SC, Town-Gown Sustainability SC. Subcommittees may include participation beyond formal CASE membership.
• Modify the existing charge of the committee to:
  “To review and provide guidance to all facets of University Administration on implementation opportunities relating to the university's Climate Action Commitment and the pursuit of environmental quality and social sustainability, through policy, infrastructural and operational changes, education, and broad engagement.”
• During fall 2020, develop a formal proposal for the CASE committee through an ad hoc subcommittee of the current E&SC. The subcommittee may include some non-E&SC members involved in the VT CAC Working Group update process. The proposal developed should include a revised charge, membership, subcommittees, and reporting lines. It should be completed by December 2020 with the transition from the E&SC committee to the CASE committee occurring in fall 2021.

13b. Implementation/Operations: Consider new options for the direction, responsibilities, staffing, location, and reporting lines of the operational unit charged with implementing the CAC.

- **Restructure the OS as a university wide unit**, renamed the **University Office for Climate Action and Sustainability (OCAS)**. The OCAS would have primary responsibility for CAC implementation, with strong connections to Facilities units as well as to related activities in academics (including the goal 10’s Climate Action Living Laboratory addressed below), student life and student affairs, and other units.
- **Appoint a new University Chief Climate Action and Sustainability Officer (CCASO)**. The CCASO would direct OCAS and chair the CASE Committee. The CCASO would report jointly to the Senior Vice President and Chief Business Officer and the Executive Vice President and Provost.
- In order to support the CCASO with CAC implementation in Facilities, a new director position would be created in the Division of Campus Planning, Infrastructure, and Facilities (DCPIF), who would oversee strategic facilities initiatives including climate action and sustainability.

13c. Learning: The 2020 CAC update process has strengthened relationships between employees in operational university units (including facilities, student life, and elsewhere), Town of Blacksburg and other local partners, and faculty and students on the ‘academic side’. The next steps include:

- Increasing educational initiatives and research opportunities in the areas of climate, sustainability, and energy using CAC projects to test new technologies and ideas and provide students with invaluable hands-on learning opportunities.
- To this end, CAC Goal 10 recommends the creation of a **Climate Action Living Laboratory (CALL)** as a unit that can enhance offerings and build bridges between facilities and academic departments, facilitating and supporting opportunities. The CALL should be situated under the reorganized OCAS.

13d. Annual Review: Conduct an annual review of the CAC goals and implementation progress through a process that involves student, staff, faculty, and community stakeholders. The annual review process should include the following features:

- The GHG Inventory Subcommittee of the revised CASE Committee will be responsible for leading annual audits of the university’s emissions portfolio.
- The results of this review will be shared publicly in accessible and easy-to-read formats, including through social media.
- There will be opportunities for stakeholders to critique and provide feedback, potentially through both a yearly community survey and yearly CASE Town Hall.

13d. Duties of Operations and Governance units:

- Collect data relevant to the CAC including GHG inventory and prepare an Annual Report of CAC Progress each fall semester for the previous fiscal year.
- Establish mechanisms to engage and educate the Virginia Tech community on the CAC and climate action
• Establish ad hoc committees to develop instructional, research and outreach programming for the Climate Action Living Laboratory (CALL)
• Evaluate CAC goals according to best practices in light of new information and standards and direct update of the CAC on a five-year cycle
• Broaden the geographic scope of the CAC to all Virginia Tech properties in future iterations to include the entire University
• Advocate for allocation and prioritization of resources to support the CAC

Goal 14. Develop innovative budgeting and financing mechanisms to generate funding and staffing to achieve Climate Action Commitment goals

Achieving the Climate Action Commitment will require financial and staffing resources. With limited resources especially as a result of the Covid-19 pandemic, CAC financial needs will be in competition with other needs and priorities of the university, including safety and security, academic excellence, quality student experience, affordable tuition and fees, and competitive faculty salaries.

Academic (E&G) funds may be used to fund projects to improve existing academic building efficiency. More creative funding mechanisms can address energy efficiency needs in auxiliary buildings not included in E&G funded efficiency improvements. Energy Performance Contracting through Virginia DMME may be an effective financing vehicle for these buildings. Also, these auxiliaries may have some bonding authority to generate investment funds for efficiency improvements. Savings in utility bills can repay capital and financing costs.

New building energy efficiency continues to be challenged by the separation of capital design/construction budgets and operating budgets. To advance life cycle cost analysis, future operating costs need to considered to justify upfront investment in efficiency.

Many VT operations are located in leased space in Blacksburg owned by the VT Foundation or others. We have included most of this space (1.45 million ft² in 45 properties, 13% of total VT space, about 70% Foundation owned) in our GHG emissions calculations. The university cannot directly reduce these emissions because it does not own the buildings. But the Foundation can improve the efficiency of its buildings that house VT operations. Lease terms could be revenue neutral for the Foundation in that the lease agreements cover the Foundation financing costs. The university pays the utility bills.

Potential Pathways:

14a. Strategically invest university E&G and Auxiliary funds to implement the 10-year Energy Management Plan targeting academic and auxiliary buildings at a level of $5 million/year in energy efficiency projects with a cumulative 8-year financial payback.
• The 2015-2020 Five-year Energy Management Plan invested nearly $3 million/year of academic (E&G) funds that resulted in efficiency improvements that averaged about a 5-year payback with energy cost savings. More creative funding mechanisms can address energy efficiency needs in auxiliary buildings (e.g., residence halls, dining halls, athletics). These buildings account for 45% for campus gross square footage.
14b. Major investment is needed to implement the **pathways for renewable electricity** both on VT buildings/lands and in the SWVA region. Options for development include:

1. **VT owned** and developed projects on VT buildings/land, and
2. **Utility or 3-party owned** and developed projects on VT buildings/land and in SWVA with VT power purchase agreement (PPA).

Option (1) provides major VT capital investment but greater long-term return and control, while option (2) requires no VT capital but less long-term financial return. A combination of the two options may be necessary to meet the CAC renewables goals.

14c. The **Virginia Tech Foundation** helps the university achieve its goals and can be a valuable partner in adopting and implementing the CAC in the following ways:

- The VT Foundation should assess efficiency opportunities in its properties **leased to VT operations** and invest in cost-effective energy efficiency measures in these properties, lowering university utility bills to offset increased lease cost to finance improvements.
- The VT Foundation should **invest in projects to implement the VT CAC** that provide a return to the Foundation. These may include solar projects on Foundation buildings, and/or solar projects on VT or Foundation-owned land.
- As the university moves toward carbon neutrality and the economy turns toward clean energy, the VT Foundation should assess the **fiduciary risk associated with its investment in fossil-fuel-reliant industries** as part of its portfolio.
- The Foundation should broaden its investments to achieve **triple-bottom-line goals (financial, social, environmental)**. It is noteworthy that the CAC Working Group vigorously debated the issue of Foundation divestment from fossil fuels and different opinions are held among group members and the wider university community. However, consensus was reached among the WG on the need to strongly consider triple bottom line values in investment and other decisions.

14d. As a unique **power utility**, VTES has opportunities, in partnership with APCO and 3rd parties, for investment in renewable energy projects in serve both campus and its town customers.

14e. Additional sources of funds to implement the CAC should be pursued,

- **Federal and state grants and research funding** for the Climate Action Living Laboratory
- **Development donor funds** are also a potential source for some of the initiatives and projects needed to implement the CAC. Naming rights for a signature Zero-Net-Energy (ZNE) building or a showcase solar farm at entry to campus are up for grabs.
- **State funding** is also available for university project development. Virginia Department of Mines, Minerals and Energy (DMME) has a cost-sharing solar development fund to cover half the costs of the Sterrett rooftop solar project and possibly other projects.
- Funding from **foundation and philanthropic organizations** can support implementation of the CAC especially elements related to innovation and academic programs.

14f. In addition to project funding, implementation of the CAC needs to **upgrade staff** to rise to the needs of the commitment, especially in energy management, energy and utility systems, building analysis and design, waste management, University compost facility operation, and campus sustainability.
Goal 15. Develop Pathways after 2030 to eliminate offsets and fossil fuels by 2050

It is difficult to anticipate how changing technology, the economy, and public policy will evolve in the next 10-30 years. Super-efficient and inexpensive solar technology and energy storage, autonomous electric vehicles, smart buildings and controls, and enhanced communications are likely, and they will change our conception of what is possible. Public policies such as a carbon fee or tax, efficiency mandates, and funding incentives are also likely to change the economics of choices we have.

Potential Pathways:

15a. A long-term and continually updated Utilities Master Plan should incorporate the goals of this Climate Action Commitment.

15b. Use the 5-year VT CAC update process to assess changing technology, the economy, and public policy related to climate action.

• 2025: 5-year CAC revision review explore options for 2030-2040 timeframe
• 2030: 5-year CAC revision review explore options for 2040-2050 timeframe

15c. Beginning with the CAC 2025 revision, develop a plan for full transition to renewable energy for campus heating systems. To promote zero emissions energy options in the plan, refine GHG inventory estimates of methane leakage from VT natural gas sources and include those estimates of methane leakage in the carbon neutral goal for 2035.

• Explore geothermal and ground source heat pump systems and other non-fossil-fuel options for heating new districts of campus.
• New districts being considered on campus should evaluate hot water rather than steam heating systems. Understanding the extreme cost of extending steam tunnels, hot water systems sourced by the existing steam loop are already being explored for new districts.
• Conversion of steam to hot water central heating systems is being considered at other universities and offers the prospect of efficient geothermal and ground source heat pump heating and cooling systems in conjunction with renewable electricity.
3. Implications of VT 2020 CAC Goals and Pathways

The fifteen 2020 VT CAC goals call for the adoption of initiatives, programs, and projects to achieve the overall goal of carbon neutral campus operations by 2030. Each of the Working Group subcommittees assessed the impacts, costs, and benefits of their goals and pathways.

Most of the initiatives proposed provide significant non-monetary benefits to the University, including GHG emissions reductions, enhanced educational quality through the Climate Action Living Laboratory, increased campus quality and livability, cultural and behavioral change, climate social justice, community engagement, cleaner air and environmental quality, and an improved university reputation. Many of the pathways require financial investment. Some have a favorable financial return on investment, while others provide little financial return but high non-financial benefits.

3.1 Impacts on GHG Emissions

Goal #1 of the VT 2020 CAC calls for carbon neutral campus operations by 2030. The FY 2019 GHG inventory shows emissions of 240,959 metric tons (MT) CO₂e. This inventory did not include sources that have been added in the 2020 CAC GHG scope. These are listed below with the mid-range estimate of how they would change the 2019 inventory:

- VT occupied leased space: 37,475 MT (+15.5%)
- AEP new emissions factor: 16,761 MT (+6.7%)
- Agricultural operations: 11,004 MT (+4.4%)
- Upstream Elect. T&D losses: 5,447 MT (+2.2%)
- Business travel: 6,282 MT (+2.6%)
- BT bus system fuel: 3,515 MT (+1.4%)
- VT forests: -2,178 MT (-0.9%)

TOTAL: 78,306 MT (+32%)

If added to the 2019 GHG inventory, total VT emissions would be 319,000 MT. In figure 2.1, the GHG emissions reduction line to zero emissions by 2030 would have to start at 32% more emissions. We will have to wait until the next GHG inventory for FY 2020 is completed in the fall using the 2020 CAC GHG scope and methodology to know what the new level of emissions will be.

Regardless of what we learn from the FY 2020 inventory, it is clear that achieving the goal of zero net carbon emissions will require meeting other goals, including: 100% renewable electricity (~50-55% reduction of emissions), transition to steam plant natural gas (~10% reduction), energy system efficiency (~5%), improved building efficiency (~10-12% reduction despite campus growth), carbon neutral agriculture (~4-5%), commuting and transportation efficiency (~2%), and other means (~3%). We would still emit about 10% of our new scope 2019 GHG estimate in 2030, or about 32,000 MT. To achieve carbon neutrality, these emissions would have to be balanced by carbon offsets. If purchased, these offsets would cost about $160,000 at $5/MT. There are better uses for these funds, so every effort should be made to drive down GHG emissions even further (see 3.2.12 below).

3.2 University Budget & Finance

This section describes the possible financial implications of many of the pathways and initiatives recommended by the CAC.
3.2.1 GHG Software Platform

While the VT GHG Master Spreadsheet has facilitated analysis of VT’s carbon footprint in past years, it is recommended that VT purchase an annual license for a formal GHG assessment software platform. SIMAP® is a carbon and nitrogen-accounting platform that can track, analyze, and improve campus-wide sustainability. This platform is the most widely used by universities for their carbon and/or nitrogen footprints; the current version or its predecessor is used by 10 of the 12 peer institutions we reviewed. It has customizable carbon emissions coefficients, flexibility in data import and export, and includes a third-party data review, which provides additional points in the AASHE Sustainability Rating System. A tier 2 software license is $600/year.

3.2.2 Costs and benefits of University Compost Facility at Kentland

Both the Agriculture/Forestry/Land Use and Waste/Recycling/Composting subcommittees strongly recommend a University Compost Facility at Kentland. The facility would reduce net animal waste GHG emissions, support soil health, relieve the need to purchase new land (estimated at $3 million) for future land application of animal wastes, and support sustainable agriculture education and research. The Facility will also provide significant benefits in management of campus organic wastes from dining halls, athletics, the vet school, and campus tree trimmings. Capital cost is estimated at $1.4-1.8 million with net operating cost of about $165,000/year.

3.2.3 Cost and benefits of Renewable Energy Certificates

In 2020, Virginia Tech purchased renewable energy certificates (RECs) from Appalachian Power Company (APCO) for $1/MWh of electricity purchased. Virginia Tech Electric Service (VTES) electricity purchases from APCO in FY 2019 were 327,452 MWh, of which 212,600 MWh were for campus use, with the remainder for town customers. For 2019, VT bought RECs for 10% of its purchases (32,745 MWh x $1/MWh = $32,745) and for 2020, VT bought RECs for 20% (65,490 MWh x $1/MWh = $65,490). APCO has 10% renewables in its power portfolio, so the total VT renewable electricity for 2019 was 20% and for 2020 30%.

Using APCO's 2018 GHG emissions rate (0.676 MT CO₂e/MWh (includes APCO’s 10% renewables), the 2020 GHG benefits of 20% RECs of VT purchases from APCO = 20% x 212,600 MWh x 0.676 MT CO₂e/MWh = 28,744 CO₂e or 12% of total 2019 VT emissions. The REC price per MT CO₂e offset = $1/MWh / 0.676 MT CO₂e/MWh = $1.48/MT CO₂e. Some argue that buying RECs seems like we are simply throwing money at the problem, but the $1.48 cost per MT CO₂e reduction is actually a good deal compared to carbon offsets, which currently run $5-10/MT CO₂e.

Nonetheless, we would rather generate or purchase renewable electricity than buy RECs, and indeed our pathways wean us from RECs as we move forward. But the 2020 RECs purchase makes a serious statement about our climate commitment, and we achieve two years early the Governor’s E.O. 43 requirement that state agencies procure 30% of their electricity from renewable sources by 2022 and 10 years early the 30% by 2030 requirement for utilities.

3.2.4 Costs and benefits of 100% renewable electricity and financing/ownership options

Pathways for Goal #2—100% renewable electricity—show it can be achieved through a combination of:

- Solar energy projects on VT lands and campus building rooftops. These can be VT owned or 3rd party owned with a VT power purchase agreement.
- **Power purchase agreements** (PPA) with utility or 3rd party-owned projects in Southwest Virginia
- Other PPAs or virtual PPAs.
- **Appalachian Power’s increasing renewable portfolio**, which is now 10% and by new state law must be 14% by 2025 and 30% by 2030.
- **Renewable energy certificates** (RECs) (purchased MWh credits) from utility or 3rd party.

Achieving 100% renewable electricity by 2030 assumes 60% **renewable generation** plus 30% **APCO renewable portfolio** and 10% **RECs** for VT steam plant cogeneration. The pathways assume a combination of solar on **VT buildings and land (15 MW)** owned by VT or 3rd-party PPA and 3rd-party-owned and APCO-owned SWVA PPA capacity (130 MW+15 MW=145 MW). **Capital costs** of VT owned solar systems are assumed to be $2/W for <0.5 MW projects and $1.50/W for >1MW projects. This works out to:

- Total capital cost for 15 MW on VT buildings/lands would be about $25-30 million.
- Total capital cost for 145 MW would be over $200 million.
- The best PPA contract rates on the market are 20-year, non-escalating flat rate of ~7¢/kWh.

While utility/3rd party PPAs are assumed to be the preferred approach for off-campus solar projects, on-campus projects can be either VT-owned or utility/3rd party owned with PPAs.

- The advantages of VT owned and managed renewable systems are greater control, reduced long-term electricity cost and greater financial return; and disadvantages are high initial capital investment and operation/maintenance requirements. VT has the unique advantage of having its own utility VTES to do this.
- The advantages of PPAs are little or no initial capital costs and no operation/maintenance cost; and disadvantages are potentially higher electricity costs and less operational control.

Considering the effects of the Covid-19 pandemic on university resources, it may make sense to initiate solar development through 3rd party PPAs, which would preserve university capital to invest in energy efficiency or other priorities.

### 3.2.5 Costs and benefits of steam plant improvements and chiller upgrades

Operating and upgrading the campus energy systems is a costly but necessary enterprise. Upgrades and modifications like the natural gas pipeline, new boilers, and new central and upgraded chillers require significant investment. However, the benefits, including a more modern energy system, greater efficiency, reduced operating costs, and reduced GHG emissions, make these smart investments. Further upgrades and modifications will be necessary, and they are part of the cost of running an institution the scale of Virginia Tech. Incorporating the energy goals of CAC to fully replace coal with natural gas and improve the efficiency of VT energy systems can be part of these necessary upgrades with marginal increase in cost, but with substantial additional benefits to the university.

### 3.2.6 Costs and benefits of 10-year energy management plan including auxiliary buildings

The 2015-2020 5-year Energy Management Plan was a great energy and economic success, as the university invested $14.2 million in energy efficiency improvements that resulted in an average 5.3-year payback or 19% return on investment (ROI). There are more opportunities for improvements in VT buildings, especially Auxiliary buildings, and the proposed 2021-2030 10-year Energy Management Plan should be funded at a level of $5-8 million per year and allowable average 8 year payback or 12.5% ROI. Retrofit of Auxiliary buildings may require a special financing mechanism.
However, additional energy management staff may be needed in Facilities to develop and implement the Plan effectively. The position of Energy Manager is still vacant and additional staff expenditures would be easily recouped by energy cost savings.

### 3.2.7 Energy efficiency retrofits in Leased buildings

1.4 million square feet of off-campus building space in Blacksburg is leased to Virginia Tech department operations, and we are now including this space in our 2020 VT GHG inventory. Therefore, it is subject to the goals of our CAC. The VT Foundation owns much of this space and the VT Office of Real Estate Management pays rent and utility bills.

The Foundation operates on a revenue neutral basis, so that any investment it makes in energy efficiency improvements in its leased buildings must be recovered by increasing rent. With prudent efficiency investments, the resulting increased rent for the university should be more than offset by a decrease in utility bills. The Foundation CEO is willing to engage in energy retrofits under these terms on a pilot basis, starting with the Corporate Research Center once a new CRC president is hired.

### 3.2.8 Implementing LEED-Silver and ASHRAE 90.1 Standards, New VT Design Standards

Facilities Capital Construction Design personnel have long incorporated LEED-Silver and ASHRAE standards in design and construction of new VT buildings and major renovations, so this part of the CAC will likely not be changed. Newly adopted VT Design and Construction Standards reflect CAC goals and are expected to streamline design decisions. Adding energy efficiency benchmark goals for energy intensity (energy/gsf) in newly initiated buildings in 2022 (20% below 2020 existing building average) and 2028 (40% below 2020 existing building average) may require some staff energy analysis, but it is intended to be a collective benchmark and not a design tool for individual buildings.

### 3.2.9. Waste Management: Costs and Benefits of a Zero Waste Campus

Waste management at Virginia Tech is a functional but fragmented enterprise, and an audit by a zero-waste consultant could yield recommendations to improve the efficacy and efficiency of operations. Table 3.1 breaks down the $1 million/year cost associated with waste management, not including Facilities Waste Management Trash and Recycling unit personnel.

Waste audits typically reveal that about 50% of the material placed in trash containers could be recycled. By improving the infrastructure (e.g., appropriate collection containers throughout campus) and educating our students, faculty and staff on how to use them with appropriate signage and education on the cost and benefits of recycling, we would be in a position to realize reduced costs and increased waste diversion and recycling rates.

**Table 3.1 Calendar Year 2019 Costs (excluding Virginia Tech Trash & Recycling Unit):**

<table>
<thead>
<tr>
<th>Service</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Republic Services</td>
<td>$130,000</td>
</tr>
<tr>
<td>Meridian Waste Virginia</td>
<td>$572,000</td>
</tr>
<tr>
<td>MRWSA Trash Tipping Fee</td>
<td>$218,859</td>
</tr>
<tr>
<td>MRWSA Recycling Tipping Fee</td>
<td>$11,518</td>
</tr>
<tr>
<td>ROF Food Waste Composting</td>
<td>$84,900</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td><strong>$1,017,277</strong></td>
</tr>
</tbody>
</table>

In CY 2019 the university reported 6,000 tons of waste: 4,000 tons of trash and 2,000 tons of principal recycling materials (PRMs). Shifting 1000 tons from trash to recycling would reduce our
MRSWA Tipping Fee from $229,500 to $208,560 and increase our waste diversion rate and recycle rate to 81% and 55% respectively. The goal to become a Zero Waste Campus by 2030 requires a 90% waste diversion rate, defined as 90% of total waste kept out of landfill.

It is noteworthy that as of this writing the national recycling market is in disarray, and to keep VT recycling vendors afloat, our recycling costs will increase 50% and approach trash tipping fees in June 2020. As President Steger said in 2008 when the cost of recycling grew and advocates feared canceling the recycling program, “Yes it’s costly, but it’s a necessary cost of doing business.”

3.2.10 Costs and benefits of transportation pathways

Transportation goals and pathways aim to reduce single-occupancy vehicle commuting and to reduce overall transportation related GHG by 40% by 2030. The benefits of these goals are numerous and far reaching. Moving people away from single-occupancy vehicles toward more sustainable mobility can enhance the quality of campus life by reducing congestion, noise, and pollution of vehicles. Improving trails, sidewalks, and mobility infrastructure will increase access for all, boost campus livability, enhance emergency access, and improve health, safety and sustainability. The reduction in vehicles also reduces roadway repair and maintenance costs and curbs the need to build costly parking structures (upwards of $25,000/space).

Costs associated with these goals and pathways include increased parking permit costs (ideally on a sliding scale based on salary), a cultural shift for those accustomed to driving, upfront costs associated with infrastructure improvements, and increased maintenance costs for existing and new alternative transportation infrastructure.

Parking Services is entirely self-funded. The revenue from parking permits and citations pays for parking structure debt, maintenance of parking lots, and salaries of employees. Therefore, any loss in revenue would have to be supplemented by a subsequent increase in revenue elsewhere. This might seem like a huge barrier to overcome, but fortunately VT parking permit prices are already comparatively low. Student resident and commuter parking permit fees are about at the median of peer institutions, but employee parking permit cost is the least expensive of peer schools, and 30% less than UVA’s fees.

3.2.11 Costs and benefits of a testbed Agrivoltaic project at the Catawba Sustainability Center and/or Kentland Farm

The Agriculture/Forestry/Land Use and Renewables subcommittees recommend developing a dual-use farmland-solar project at Catawba and Kentland. Such a system would likely have capital costs of about $1.65 million/MW installed capacity, require 8 acres/MW, produce 1340 MWh/MW or 168 MWh/acre, offset 1000 MT CO₂e/MW or 125 MT CO₂e/acre, and have a levelized cost of electricity of about 7 cents/kWh for 25 years, assuming 3% cost of money. This would be a cost-effective arrangement for VTES.

3.2.12 Costs of carbon offsets

Achieving the overall CAC goal of a carbon neutral VT campus by 2030 may require the purchase of carbon offsets. Many of the goals and pathways will drive GHG emissions down to near zero by 2030, especially 100% renewable electricity, energy efficiency retrofits to energy systems and buildings, replacing coal with natural gas, and reduction of transportation, agriculture, and waste emissions. But the CAC specifically calls for carbon offsets in 2030 to negate remaining emissions from agriculture, business air travel, and newly initiated buildings. Pathways for goals 3 and 15 call for the CAC 2025 update to plan for renewable heating and promotion of zero-emissions...
options by including upstream natural gas methane leakage in our carbon neutral goal by 2035. This may initially increase the need for offsets after 2035.

Most universities use carbon offsets to reduce their GHG emissions and approach carbon neutrality. The purchase of carbon offsets can be costly. Current offset prices are $5 - 10/MT CO₂e. Carbon offsets to cover 2020 VT CAC GHG emissions of about 300,000 MT would be $1.5 – 3 million. As calculated in section 3.2.1, if we achieve our goals and pathways, we may still emit about 10% of our new scope 2019 GHG estimate in 2030, or about 32,000 MT. To achieve carbon neutrality, these emissions would have to be balanced by carbon offsets. If purchased, these offsets would cost about $160,000 at $5/MT.

There are better and more efficient uses for this money. Every effort should be made to avoid the need for offsets by investing in energy efficiency and renewable energy on campus. This type of investment not only reduces emissions and the need for offsets, but also provides local and long-term financial benefits.

### 3.3 University Educational Mission

As a Land Grant university, Virginia Tech has comprehensive educational instruction, research and outreach programs. Several of these programs focus on sustainability and its many dimensions related to the physical, natural, and social sciences; technology; humanities; and economics, policy, and politics. The 2020 VT Climate Action Commitment and its implementation provide a wide range of educational opportunities for these programs, faculty, and students.

**The VT Climate Action Commitment is a bold initiative.** It calls for aggressive changes in the campus physical plant and energy sources by applying cutting-edge technologies and designs. It calls for innovative partnerships and financial arrangements to fund and implement these changes. It calls for structuring cultural change to effect sustainable behavior in living, be it commuting to campus, recycling and composting, or overall consumption. It calls for engagement of all faculty, staff, students, and the larger community to work toward a common goal of climate action, social equity, and justice.

This bold initiative is ripe for study, for analysis, and for learning. As with many experiments, the CAC will have gotten some things wrong. We invite students, faculty and staff to engage with the CAC as a living document and with the campus as a living system, discovering what works and what does not. There is much to learn from this experiment and many lessons that Virginia Tech will be able to share with others.

The **Climate Action Living Laboratory (CALL)** aims to provide supportive infrastructure for various projects and initiatives. Some projects may be as small as a term paper or class project while other initiatives may be as large as well-funded research programs or new initiatives of Cooperative Extension. Regardless of size and complexity, the goal is to apply experiential learning to the implementation of the CAC using the living physical and human campus as its focal point. Since the 2009 VT CAC, the university has implemented programs to engage students in campus sustainability, mostly through the Office of Sustainability in the Facilities Division. The Sustainability Internship and the Green RfP programs have been very successful. The 2020 VT CAC builds on this experience and calls for broadening the effort to engage more students, faculty, departments, and colleges directly in the University’s climate action endeavors.
Therefore, if CALL is to be effective, academic leaders, including the Provost, the college deans, and relevant department heads, will need to support the effort. Implementation Goal 13 calls for restructuring operations and governance to do this.

### 3.4 University Operations and Staffing

The goals and pathways of the 2020 VT CAC will require changes in some operations and staffing to pull them off.

#### 3.4.1 Operations

The most important potential operations change proposed in the 2020 CAC involves the **Office of Sustainability** (OS), which has played a significant role in implementing the 2009 VT CAC and engaging the campus in sustainability programs. For its accomplishments with limited staff, the Office deserves great praise. The 2020 VT CAC calls for an expanded campus effort for engagement and to integrate climate action into the University’s educational mission as recommended in goals 10 and 13. As a unit in the Facilities Department, the OS is somewhat constrained in its ability to engage the academic, student affairs, and auxiliary sides of campus to achieve both the concrete climate action goals and the Climate Action Living Laboratory (CALL) goal.

Goal 13 calls for implementation of the CAC “at a high level of university operations and governance.” It recommends **restructuring the OS as a university wide unit**, and renaming it the **University Office for Climate Action and Sustainability (OCAS)**. The OCAS would have primary responsibility for CAC oversight, with strong connections to Facilities units as well as to related activities in academic units (including the goal 10’s Climate Action Living Laboratory), student life and student affairs, and other units.

The OCAS would be directed by a new University **Chief Climate Action and Sustainability Officer (CCASO)**. The CCASO would report jointly to the Senior Vice President and Chief Business Officer and to the Executive Vice President and Provost. The CCASO would chair the restructured Climate Action, Sustainability and Energy (CASE) committee, which would be a restructured version of the current Energy & Sustainability committee (see 3.5 below).

Goal 13 pathways also recommend supporting the CCASO with CAC implementation in Facilities, by creating a director position in the Division of Campus Planning, Infrastructure, and Facilities (DCPIF), who would oversee strategic Facilities initiatives including climate action and sustainability and other strategic goals.

A second implication for operations is included in Goal #7 pathways. **VT waste management**, including trash, recycling, composting, construction waste, and specialty waste, is functional but fragmented across several departments. The CAC calls for a zero-waste consultant to do a waste and management audit and recommend organizational changes to improve efficiency to achieve CAC goals. The Working Group considered recommending hiring a **Waste Manager** for all of campus or forming a **Waste Council** of all departments currently involved, but ultimately decided to rely on the consultant study to determine the best outcome.

#### 3.4.2 Staffing

Some of the Facilities departments are already unstaffed, and implementation of the 2020 VT CAC will add to their requirements. The CAC specifically identified some areas in need of staffing:
- Create a university **Chief Climate Action and Sustainability Officer** (CCASO) to direct the new University Climate Action and Sustainability Office (CASO) to oversee implementation of the VT CAC. The CASO would elevate and replace the existing Office of Sustainability, and the CCASO would report jointly to the Senior Vice President and CBO and the Executive Vice President and Provost. The CASO would require sufficient staff to support CAC implementation.

- Fill the VT **Energy Manager** position and supplement staff as needed. This position has been vacant for more than one year and is critically important for implementing the entire Climate Action Commitment. The new energy manager should have sufficient staff.

- Sufficient **engineering and design staff** to achieve CAC goals for buildings

### 3.5 University Policies and Governance

The principal governance committee currently dealing with the CAC is the Energy & Sustainability Committee (E&SC). Since its creation in 2007, it has played an important role in climate action and sustainability. A subcommittee of the E&SC developed the 2009 VT Climate Action Commitment and Sustainability Plan, and another developed updates in 2013 and 2014. Indeed, the charge letter to the Working Group requires informing the E&SC of progress, and governance approval of the 2020 VT CAC will commence with E&SC review.

Like the current Office of Sustainability, the E&SC is positioned in the university’s facilities world. Although it has faculty and students in addition to staff as members of the committee, it reports to the non-academic Commission on University Support (CUS), which reports to University Council.

2020 CAC Goal #13, and the associated pathways, calls for a reconstitution of the E&SC, renaming it the **Climate Action, Sustainability, and Energy (CASE) Committee**, and revising its charge, membership, standing subcommittees, and reporting lines not only to CUS but also to academic and student affairs commissions (see section 4.1).

### 3.6 University Culture

The 2009 VT CAC and Sustainability Plan aspired to create a campus “culture of conservation,” understanding how important engagement and behavior were to the achievement of its goals. The same is true today as we develop the 2020 version of the CAC. We look around and while many students, faculty, and staff are dedicated to actions and behavior to enhance climate action and sustainability, we see people making choices about waste generation, littering, transportation, energy use, and overall consumption that are not consistent with sustainable living or necessary climate action. The actions of an individual will not save the world, but the world cannot be saved without their collective action.

In response, the Working Group established a subcommittee on Structuring Sustainable Choices to explore programmatic opportunities to create conditions where institutional barriers to sustainable behavior are reduced and sustainable choices are made easier, cheaper, and quicker. Our focus is not on changing people’s values, but on improving information and opportunities for alternative transportation, waste recycling, proper waste handling, reducing energy waste, and other choices. Along with better choices comes conscious sustainable behavior and cultural change.
4. Implementing, Engaging, Monitoring, Reporting, Updating VT CAC

4.1 Structure, Operation and Governance of VT CAC Implementation

The governance and operations of climate action and sustainability at Virginia Tech has led to substantial progress during the last decade. However, the comprehensive nature of the VT 2020 CAC will require a broader approach than existing arrangements. Currently, the Office of Sustainability (OS) in the Facilities Department has primary responsibility for sustainability operations and the Energy & Sustainability Committee (E&SC) is the primary governance unit.

Both are positioned in the Facilities world, with OS reporting to the Chief Facilities Officer and the E&SC reporting to the Commission on University Support (CUS). Goals 1-5, 7, 9, and 15 are the most important actions to reduce GHG emissions and are all dependent on initiatives by the Facilities departments. Facilities must play a critical and key role in CAC implementation.

However, the CAC goals go farther than the physical plant and call for action through the university’s educational mission, campus culture, social equity and justice, and engagement of all departments, faculty, staff and students. Both the OS and the E&SC have engaged a broader perspective than Facilities. For example, with a limited staff, OS has operated effective student internship and student-initiated Green RfP programs, and the E&SC has a diverse membership of faculty, students, and Facilities staff.

But to fully implement the VT 2020 CAC, modification of both operations and governance must be considered. Goal #13 and the associated pathways suggest operational and governance structures that aim to elevate the university’s commitment and better reflect the comprehensive nature of the 2020 CAC.

4.1.1 Structure and Operations for VT CAC Implementation

Goal #13 and the associated implementation pathway call for changes in the direction, responsibilities, staffing, location, and reporting lines of the operational unit charged with oversight in implementing the CAC. CAC implementation includes goals related to the physical plant and facilities and those relating to academics, student affairs, and campus culture. The Office of Sustainability (OS) has been a logical unit for CAC implementation, but its location in Facilities will constrain its effectiveness. Given the proposed breadth of the CAC, Goal #13 calls for:

- Making the OS a university-wide unit, renamed the University Office of Climate Action and Sustainability (OCAS). The OCAS would have primary responsibility for CAC implementation, with strong connections to Facilities units as well as to related activities in academics (including the Climate Action Living Laboratory), student life and student affairs, and other units.
- A new University Chief Climate Action and Sustainability Officer (CCASO). The CCASO would report jointly to the Senior Vice President and Chief Business Officer and to the Executive Vice President and Provost. The CCASO would direct the OCAS and chair the restructured Climate Action Sustainability and Energy (CASE) committee (see below).
- Recognizing the critical work to be done within Facilities, creating a director position in the Division of Campus Planning, Infrastructure, and Facilities (DCPIF), who, working with the CCASO and appropriate staffing, would oversee strategic facilities initiatives including climate action and sustainability and other goals such as campus safety and accessibility and inclusion.
4.1.2 Governance for VT CAC implementation

The governance pathway in goal #13 calls for restructuring the university Energy and Sustainability Committee (E&SC), including its name, charge, membership, and reporting, to oversee the implementation and review of the CAC goals and progress involving all stakeholders.

- Rename the E&SC the Climate Action, Sustainability, Energy (CASE) Committee.
- Revise the reporting lines of the CASE committee to include, in addition to CUS, relevant commissions for student life, academics, faculty and staff.
- Modify the current charge of the E&SC for the CASE Committee. Consider the following:

  “To review and provide guidance to all facets of University Administration on implementation opportunities and issues relating to the university's Climate Action Commitment and the pursuit of environmental quality and social sustainability, through policy, infrastructural and operational changes, education, and broad engagement.”

  Modify the membership of the new CASE committee to include additional representation of the VP for Campus Planning, Infrastructure & Facilities (VPCPIF), the Provost’s Office, Student Affairs, student environmental organizations, and local community partners.

  - Current E&SC membership:
    - Six Ex-Officio; Two from Facilities Services; One from Environmental Health & Safety; Four from Faculty Senate; Two from Staff Senate; One College Dean; Two graduate students (GSA); Two undergrad students (SGA)
  
  - Suggested additional members:
    - Ex-Officio (Chief Climate Action & Sustainability Officer (CCASO), Chair; Sustainability Manager, Dining Residence Life; Asst. VP for Utilities; Executive Vice Provost; Director, Parking & Transportation; Sustainability Manager, Town of Blacksburg); student representing environmental group (by SGA); student representing frontline communities (by Vice Provost for Inclusion/Diversity)

- Create CASE subcommittees (SC) that may include: CAC Implementation SC, GHG Inventory SC, Climate Action Living Laboratory (CALL) SC, Climate Justice SC, Engagement & Sustainable Choices SC, Education & Student Involvement SC, Town-Gown Sustainability SC. Subcommittees may include participation beyond formal CASE membership.

- Process for renaming, reconstituting E&SC to CASE: Changes to VT governance structure, names, membership, charges are not straightforward and take some time with annual appointments. It is recommended that the following process be used:
  - In fall 2020, E&SC forms a task force or subcommittee to explore CAC operations and governance recommendations, including developing paperwork for changing committee name, charge, membership, and subcommittees.
  - Provided the BOV approves the 2020 CAC update, the E&SC will submit proposed changes in spring 2021 for University Council approval. The new CASE would begin in fall 2021.

4.1.3 Duties of Operations and Governance units

- Collect data relevant to the CAC (energy use, GHG inventory, and other pathway metrics) and prepare an Annual Report of CAC Progress each fall semester for the previous fiscal year.
- Evaluate CAC goals according to best practices in light of new information and standards and lead five-year update review of CAC (2025 and 2030)
- Establish mechanisms to engage and educate the Virginia Tech community on the CAC and climate action
- Establish ad hoc committees to develop instructional, research and outreach programming for the Climate Action Living Laboratory (CALL)
• Broaden the geographic scope of the CAC to all Virginia Tech properties in future 5-year updates to include other University properties/locations
• Advocate for allocation and prioritization of resources to support the CAC

4.2 Engaging the Community

Implementation of the CAC requires major changes in the campus physical plant. But it also requires involvement of the entire community including students, faculty and administrators, staff, and academic and auxiliary departments in order to:

• Develop innovative instructional, research, and outreach initiatives incorporating these physical changes as part of the Climate Change Living Laboratory (CALL),
• Structure sustainable choices by the community to enhance the campus sustainability culture,
• Participate in annual reviews and 5-year updates of the Climate Action Commitment.

Goal #13 describes the means for this engagement through the restructured University Office for Climate Action Sustainability (OCAS) for operations and the Climate Action, Sustainability, and Energy (CASE) Committee for governance.

Under the direction of a university Chief Climate Action and Sustainability Officer (CCASO), the restructured OCAS and CASE Committee would not only monitor developments related to the CAC in Facilities but also develop and promote academic and student life CAC initiatives through engagement groups of academic departments and faculty for CALL programs and student affairs and student life representatives for campus culture programs. These latter initiatives would engage existing student life programs, including student orientation, VT Experience, Dining and Residence Life, and others to promote sustainable choices and behavior.

4.3 Annual Report of Progress and AASHE STARS Reporting

Each fall semester, the current Office of Sustainability has prepared an annual sustainability report describing climate action and sustainability activities in the prior fiscal year (FY) using the VT 2009/2013 CAC framework. Indeed, the annual report was called for in the original CAC and has been very effective in not only documenting progress for all to see, but also enhancing performance.

The new OCAS would prepare an Annual Report on VT Climate Action & Sustainability.

In addition, the OS conducts the AASHE STARS assessment every three years. The Association for the Advancement of Sustainability in Higher Education (AASHE) monitors and evaluates college sustainability programs. AASHE’s Sustainability Tracking, Assessment & Rating System (STARS) is used to assess sustainability progress. More than 400 institutions have earned a STARS rating, making the program the most widely-recognized framework in the world for publicly reporting comprehensive information related to a college or university’s sustainability performance. Participants report achievements in five overall areas: academics, engagement, operations, planning and administration, and innovation and leadership. The 2014 update of the VT Sustainability Plan adopted the STARS assessment as the main evaluation tool for overall VT sustainability.

Because of demonstrated effectiveness of the annual report and the AASHE STARS assessment, the Working Group recommends their continued use to monitor and evaluate progress in achieving the VT 2020 CAC. As described in section 4.2, the restructured OCAS would continue to take the lead for these reviews with enhanced engagement of stakeholders through review groups and through the CASE Committee in governance.
4.4 GHG Inventory Procedures

The GHG Inventory Subcommittee Report details data collection scope, method, and process recommendations. They call for annual review of various data sources and assumptions including:

- Geographic Boundaries
- Global Warming Potentials
- Electricity
- Other energy Fuels
- Transportation
- Business Travel
- Water Use and Waste Water
- Waste Disposal
- Food and Dining
- Agricultural and Forestry Operations
- Use of Climate Action Living Laboratory to assist in GHG Inventory

While the *VT GHG Master Spreadsheet* has analyzed VT carbon footprint in past years, it is recommended that VT purchase a formal GHG assessment software platform. SIMAP (Sustainability Indicator Management and Analysis Platform) is a carbon and nitrogen-accounting platform that can track, analyze, and improve your campus-wide sustainability. It is the most widely used GHG inventory method of analysis and is used by 10 of the 12 peer institutions we reviewed. It has customizable carbon emissions coefficients, flexibility in data import and export, and includes a third-party data review, which provides additional points in the AASHE Sustainability Rating System.

4.5 Timing of Recommended Pathways and Implementation Milestones

4.5.1 Timing of Recommended Pathways

The VT 2020 Climate Action Commitment provides a long-term vision of Virginia Tech progressing in its duty to contribute to a carbon neutral world. But every long-term journey begins with initial steps. Therefore, our goals below identify not only aspirations but also Pathways to achieve them. These Pathways identify actions in following three timeframes:

a. **Immediate Actions, 2020-2022**

   It is critical that the university take some action quickly, not only to show it is serious about the commitment, but also because climate change is upon us and it is time to act. Chapter 9 presents several “shovel ready” initiatives ready for action in this timeframe.

b. **Mid-term Actions, by 2030**

   Other aggressive actions will require developing partnerships, detailing strategies, and securing funding that will take time, but we believe 2030 to be a critical target since it is a key milestone of the VT 2020 CAC and the Virginia Clean Economy Act of 2020.

c. **Long-term Actions, by 2050**

   Some significant actions that affect the overall infrastructure of the university will require more time for affordable technology to develop, energy markets to evolve, and state and federal policies to advance, including a meaningful price on carbon.
4.5.2 Implementation Milestones

The VT 2020 CAC calls for an annual review and report of progress conducted by the new UOCAS and a five-year update to the CAC conducted by the reconstituted E&SC, the Climate Action, Sustainability and Energy (CASE) Committee. The five-year updates should occur in 2025 and 2030. The following milestones in table 4.1 are taken from the goals and pathways.

**Table 4.1 VT 2020 CAC Implementation Milestones**

<table>
<thead>
<tr>
<th>Date</th>
<th>Goal</th>
<th>Milestone</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>2</td>
<td>30% Renewable Electricity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BOV approves VT 2020 CAC</td>
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<tr>
<td>2021</td>
<td>13</td>
<td>E&amp;SC renamed Climate Action, Sustainability &amp; Energy (CASE) Committee</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>Operation plan for Climate Action Living Laboratory (CALL)</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Candidate identified for Zero-Net-Energy new building to be built by 2026</td>
</tr>
<tr>
<td></td>
<td>3,4</td>
<td>1st year of 10-year 2021-2030 Energy Management Plan</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Fishburn Forest student-led wind assessment</td>
</tr>
<tr>
<td>2022</td>
<td>2</td>
<td>2.3 MW solar PV on VT rooftop and land</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>VTES Solarize program for Town customers, 250 kW net metered</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Electricity use 10% below 2006 (Governor’s E.O. 43)</td>
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<tr>
<td></td>
<td>5</td>
<td>Newly initiated buildings EUI 20% below 2020 existing average</td>
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<tr>
<td></td>
<td>8</td>
<td>Sustainable Procurement Policy v.2</td>
</tr>
<tr>
<td>2023</td>
<td>14</td>
<td>VT Foundation energy efficiency plan for leased buildings (CRC)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>VTES Community Solar project for Town customers 0.5-1 MW</td>
</tr>
<tr>
<td>2024</td>
<td>3</td>
<td>Chiller Phase II Upgrade complete</td>
</tr>
<tr>
<td>2025</td>
<td>3</td>
<td>Total conversion to natural gas in steam plant; plan for transition to renewable fuel</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>5-year CAC update: Explore options for 2030-2040</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Recycling rate 55%; Waste diversion rate 85%; reduce trash to landfill/capita by 25%</td>
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<tr>
<td></td>
<td>9</td>
<td>Reduce Single-occupancy-vehicle commuting by 20%</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>10 MW solar PV on VT lands</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Explore geothermal heat pump hot water heating options for new districts</td>
</tr>
<tr>
<td>2026</td>
<td>5</td>
<td>Signature Zero-Net-Energy (ZNE) building on campus</td>
</tr>
<tr>
<td>2027</td>
<td>2</td>
<td>10 MW battery storage for VT Smart Grid research by VT PEC-VTES partnership</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>35 MW solar PPA with Apco/3rd party</td>
</tr>
<tr>
<td>2028</td>
<td>5</td>
<td>Newly initiated buildings EUI 40% below 2020 existing average</td>
</tr>
<tr>
<td>2029</td>
<td>2</td>
<td>100 MW solar PPA with Apco/3rd party</td>
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<tr>
<td>2030</td>
<td>15</td>
<td>5-year CAC update: Explore options for 2040-2050</td>
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<tr>
<td></td>
<td>1</td>
<td>Carbon neutral campus operations</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>100% Renewable Electricity</td>
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<tr>
<td></td>
<td>4</td>
<td>Total building energy use down 10%, EUI down 20% below 2020</td>
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<tr>
<td></td>
<td>5</td>
<td>Newly initiated buildings carbon neutral operations</td>
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<td></td>
<td>6</td>
<td>Carbon neutral agriculture/forestry operations</td>
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<td></td>
<td>7</td>
<td>Zero Waste campus</td>
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<tr>
<td></td>
<td>9</td>
<td>Transportation emissions reduced 40% from 2020</td>
</tr>
<tr>
<td>2050</td>
<td>15</td>
<td>Fossil fuel free campus</td>
</tr>
</tbody>
</table>
4.6 Five-year CAC Update

The VT 2020 Climate Action Commitment is our best effort for today, but the world is changing rapidly in technology, economy, policy, and priorities. It is important to keep the CAC current by providing annual reviews and updates on a five-year cycle. The update process should not be as intense as that of the 2020 CAC Working Group, but it should engage a committee of faculty, students, and staff stakeholders. The update would be led by a subcommittee of the CASE Committee in governance. The annual reports will ease the pain of data gathering, but there is a need to assess the conditions and assumptions of the 2020 CAC process and modify goals and pathways as needed.

Our focus in the 2020 CAC has been on 2030, mainly because it is difficult in these changing times to envision the world of climate change, its effects, mitigation strategies, and the state of technology and policy beyond the next decade. For this reason, 2020 CAC goal 15 provides a vision for a fossil fuel free campus in 2050 without much detail because we just don’t know what the next three decades will bring. Therefore, the Five-year CAC Update gives the opportunity to take stock of the world, of the nation, of the Commonwealth, and of the university, as well as of technology, economy, policy and priorities, to revise as needed the CAC goals and pathways. Goal 15 recommends the 2025 update assess preliminary prospects for the 2030-2040 decade, and the 2030 update do the same for 2040-2050. It also suggests the 2025 update begin to initiate climate action at other Virginia Tech locations beyond Blacksburg.
5. What We Learned from Community Engagement

The 2020 Climate Action Commitment (CAC) update process placed great emphasis on genuine and meaningful community engagement. Engagement provides opportunities to: crowdsource good ideas; collect feedback, including on implementation challenges and different impacts, from as wide and diverse a swath of the population as possible; inform the community of our efforts, including options being considered; and build support for the recommendations the CAC working group will ultimately make.

The Engagement Subcommittee chose various means of participation that ranged from ‘informing’ to ‘involving’ on the International Association for Public Participation’s Spectrum of Participation.\(^1\) The CAC update process overall--with its robust network of subcommittees--may be considered a true ‘collaborative’ enterprise, with over 100 students, staff, faculty, and community members involved.

In terms of wider outreach, the Engagement Subcommittee originally planned on holding a major half-day town hall event on campus. Unfortunately, COVID-19 made that impossible. Nonetheless, the group facilitated the implementation of a range of ‘physically distanced’ engagement activities:

- Created a dedicated website portal introducing the CAC process and sharing committee materials\(^2\)
- Shared videos focused on progress updates regarding the work of the WG and the subcommittees
- Crafted VT News stories
- Managed a dedicated email address for the initiative
- Distributed a survey widely throughout the community, which received 242 unique responses
- Convened a series of 12 Zoom meetings, 3 general and 9 focused on subcommittee topics, which involved over 226 people\(^3\)

Each of these streams of engagement is further detailed in this section, and insights and information collected through them is summarized. Even more information is available in the Engagement Subcommittee final report. **Key findings from these various engagement efforts are:**

- **Aggressive action to tackle climate change is broadly supported** throughout the community
- Various good ideas both emerged and were affirmed through this process, underscoring their potential value to the community

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\(^1\) International Association for Public Participation (2018). IAP2 Spectrum of Public Participation.  

\(^2\) The central engagement website is: [https://svpoa.vt.edu/index/VTCACRevision.html](https://svpoa.vt.edu/index/VTCACRevision.html)

\(^3\) These are not unique people, as many participated in more than one session
● Emphasis was placed on **systemic or “upstream” solutions** rather than placing the onus on behavior change of individuals

● **Key champions and additional stakeholders** important for propelling further action were identified

● There is **broad support for key actions proposed through the CAC update** process, including:
  ○ A shift to **carbon neutrality and 100% renewable energy**, with an emphasis on increased solar energy
  ○ **Alternative transportation** and reductions in private automobile usage
  ○ A **reduction in overall energy demand** via improved building efficiency standards
  ○ Better **waste and energy management**, including through a comprehensive composting system and a more sustainable (i.e. circular and local) procurement system
  ○ **Partnering with the local community** and municipal governments to implement climate solutions
  ○ **Structuring VT as a ‘living laboratory’** for sustainability, integrating sustainability into academics, research, and operations and engaging faculty, staff, students, partners, and the community through action-focused networking
  ○ **Incorporating environmental justice** (including climate justice, energy justice, and food justice) considerations into all decision-making processes pertaining to the procurement and consumption of resources.

5.1 Means of Engagement: Webpages, Videos, and VT News Coverage

The CAC 2020 update web pages and videos play critical roles in both disseminating information and encouraging community members to further engage. Thanks to the generous involvement of the communications team in the Office of the Senior Vice President and Chief Business Officer, the initiative established a network of webpages. The various pages setup for the CAC 2020 update convey the following:

- **Central webpage** - [https://svpoa.vt.edu/index/VTCACRevision.html](https://svpoa.vt.edu/index/VTCACRevision.html)
- **Working Group information (process and interim products)** - [https://svpoa.vt.edu/index/VTCACRevision/VTACWorkingGroup.html](https://svpoa.vt.edu/index/VTCACRevision/VTACWorkingGroup.html)
- **Engagement process** - [https://svpoa.vt.edu/index/VTCACRevision/VTAC-Convene.html](https://svpoa.vt.edu/index/VTCACRevision/VTAC-Convene.html)

A key outreach activity for information dissemination is a series of videos introducing the scope, preliminary findings, and proposed strategies of the overall workgroup and each subcommittee. In total, ten videos were prepared; these are available through the ‘Engagement Process’ page.⁴ These videos were created by subcommittee members themselves and authentically reflect the breadth of issues and ideas being tackled by subcommittees.

The site also contains working group and subcommittee files.

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⁴ [https://svpoa.vt.edu/index/VTCACRevision/VTAC-Convene.html](https://svpoa.vt.edu/index/VTCACRevision/VTAC-Convene.html). The videos are permanently available through YouTube at: [www.youtube.com/playlist?list=PLNp2Qie0vp7spOjgZxcQvyje56MQCvBFN](www.youtube.com/playlist?list=PLNp2Qie0vp7spOjgZxcQvyje56MQCvBFN)
5.2 Survey Process and Results

A survey was designed and deployed to engage community members--including students, staff, faculty, and residents of Blacksburg and the wider region--to collect their feedback on the issue of climate change, VT’s prior and ongoing efforts to address the issue, and potential future actions. Best practices in survey design were employed to ensure that questions adequately met the research objectives of the Climate Action Commitment update process. A copy of the survey instrument is attached to the Engagement Subcommittee report as Appendix 1. The survey was hosted on Qualtrics, a VT-supported survey management system.

The survey was distributed through a variety of channels, with the dual goals of reaching both a wide and diverse audience. Distribution channels included various departmental email lists, community email lists, student emails lists, and constituency organization email lists. The Engagement Subcommittee placed emphasis on getting a diverse set of opinions and ensuring that various communities were engaged.

Calls to participate were also included in the various versions of the VT Newsletter, and were sent multiple times to students, faculty and staff, and community members and alumni. All were invited to watch the videos prepared by the various Climate Action Commitment subcommittees (see section above), complete the survey, and register for one or more of the Zoom convening sessions (see next section). The exact questions asked are outlined in Appendix 1 of the Engagement Subcommittee report.

5.2.1 Survey Responses

In total, 242 people completed the survey. Note that not everyone answered all questions, so the response rate per question (N) is provided in this analysis as appropriate. Given COVID-19 and all of the distractions that entailed, the Engagement Subcommittee was very satisfied with this response rate. This cannot be considered a representative sample of the university community by any means; however, it suggests that a significant number of community members are concerned about this issue and feel that action is necessary. The following subsections summarize survey findings.

Perspectives on climate change

The vast majority of respondents (92% of the 205 that answered that question) feel that “most scientists do think climate change is happening”. Ten responded that there is “still significant disagreement among scientists”. In terms of their own views, a similar number (91%) believe that “climate change is mostly caused by human activities”. 11 respondents believe that “climate change is happening, but is mostly caused by natural processes, not human activities”. Only one respondent believes that “climate change is not happening”.

Participants were also asked how serious of a threat they believe climate change is to human existence within the next 50 years, on a scale from 1 (not happening) to 5 (major threat). The mean response was 4.41 (N=205), indicating overwhelming belief that climate change is a critically important issue to the vast majority of respondents.
When asked to rank in order who is responsible for slowing climate change, a large proportion (129 out of 199 respondents) chose ‘public sector organizations (governments)’. This suggests a strong degree of support for government intervention to tackle a problem of this complexity and magnitude. An even larger proportion (136) chose ‘private sector organizations (corporations)’ as second most responsible; this would suggest that respondents feel that companies must shoulder significant responsibility for implementing necessary changes to their business practices and operations to address climate change. Roughly equal proportions ranked ‘individuals’ and the ‘nonprofit sector’ third most responsible (81 and 76 respectively), and fourth most responsible (71 and 107).

When asked to assess how important it is that VT act to address climate change--on a scale from not important (1) to top priority (5)--the vast majority (140 of 199) chose ‘5’. The mean choice was 4.52. Participants were also asked why it is important that VT in particular acts (or should not) in an open-ended question. Representative responses include:

- “VT is a land grant university, and as such, has a responsibility to take care of the land and those who dwell on it, and to direct its teaching and research for the improvement of all of Virginia's citizens.”
- “I think the most important role is doing climate-change-related education. Make every Virginia Tech community member realize how serious this issue is and the importance of taking actions.”

These are just two examples of the almost 200 comments submitted. Many are longer, reflecting the thoughtfulness of respondents. The raw submissions to this any the other questions throughout this section may be found in Appendix 2 of the Engagement Subcommittee report.

When asked how familiar they are with Virginia Tech’s current climate commitments on a scale from 1 (not at all) to 5 (extremely familiar), responses were mixed; the mean response was 3.2. Ten respondents out of 201 reported they had no familiarity at all (1). This relatively low rating among a response pool that presumably has a higher than average level of concern and awareness about this issue suggests that more should be done to inform and engage the community around VT’s climate plans and actions.

Respondents also feel that Virginia Tech is not doing enough to meet its climate commitments. When asked how well they would say Virginia Tech is doing at meeting its current climate action commitments on a scale from 1 (extremely poor) to 5 (excellent), the mean response was 2.99. Only nine respondents think VT is doing ‘excellent’. A similar number (10) said ‘extremely poor’, with the rest between those two polls. When asked why they feel that way with an open-ended follow up question, participants gave thoughtful responses; three that reflect differing views are:

- “Being a student involved in the Climate Action Commitment Subcommittee for [agricultural] GHG emissions I believe that the University is meeting the goals of the commitment. Introducing proposals for a greener future at Virginia Tech is important and following through on those goals is also important.”
“I think we could do more to enact policies that promote sustainable energy use and procurement practices. I think we are lacking some of the systemic pieces that will actually make large changes. I think this is also hard because most changes that are made require departments to front the cost - which is challenging.”

“I haven't seen a lot of visible examples of VT taking action to combat climate change”

In an effort to better understand the degree to which respondents would prioritize climate action vis-à-vis other important issues the community faces, they were asked: *If Virginia Tech were to receive a million-dollar gift, what percentage would you allocate to addressing climate change versus other interests VT faces (e.g., housing, diversity scholarships, etc.)*? The mean response was quite high at 49%, with individual responses ranging all the way from zero to 100%. The standard deviation was 26.9%.

**Climate actions and barriers**

Participants were also asked what they would recommend that Virginia Tech do as an organization to address climate change (through an open-ended question). Here too, respondents provided a rich set of responses that are informative to the Climate Action Commitment update process. Sample responses are:

- “Set goals and stick to them. For instance, the commitment to having a carbon neutral campus by 2030 is a great goal. Having committees and institutional accountability to ensure that VT is on track to meeting this goal is imperative. The specific ways by which these goals can be achieved are highly variable, but there seems to be obvious areas where a huge difference can be made from an institutional level, such as decreasing the energy consumption of campus buildings, pursuing construction practices with a lower carbon footprint, initiating renewable and/or lower emissions energy use for campus power, investing in more sustainable transportation infrastructure around campus and blacksburg.”
- “Remove single use plastic bags (banned), support Blacksburg transit in transitioning to electric busses, all buildings should be powered by renewables much sooner than 2040.”

Participants were also asked what they would recommend that we as individuals do to address climate change. Responses crossed a wide variety of areas, including but not limited to transportation, energy consumption, waste production, and diet. Two sample responses are:

- “Be the change! Get involved with groups that are creating policies that will help the entire VT community adopt and engage in the efforts. We need to embrace the goals and do our part to achieve them.”
- “We as individuals should simply do the "small things". We've seen that, with the spread of COVID-19, things so small as washing your hands and staying 6ft apart make MASSIVE differences in the spread of the disease. Climate change is the same way. Small, little contributions such as turning the lights off, getting more efficient systems, or potentially switching to a solar system, makes a huge difference when everyone does it.”
Participants were asked what barriers prevent them from using alternative forms of transportation. 92% of respondents identified ‘convenience’ as a reason why they drive or get a ride to campus. Comments provided included:

- “During the morning time (8:00-9:00AM) and afternoon time (4:00-5:00pm), the bus is too crowded. And sometimes already full. So it might take me 30-40 minutes to get onto a bus.”
- “12 min commute from [Christiansburg] vs. 40+ min by bus and only intermittent service.”

72% said ‘access (e.g., no bus stop near me)’ is a primary barrier. An example comment here: “Nearest bus stop would be several miles walk, along busy roads, with no sidewalks”. 60% said ‘safety (e.g., no bike lanes)’. Safety concerns expressed in the comments included:

- “When it snows sidewalks are often not clear. One has to either walk in the street or risk falling on the sidewalk.”
- “No showers at the Northern Virginia Center”
- Drivers are not used to leaving room for pedestrians or bikers here. Prices Fork over 460 is especially dangerous.”

Participants were asked a similar question around diet: “What barrier(s) prevent you from having a more ‘sustainable’ diet, which may include eating more organics, eating local products, being vegan or vegetarian, and/or eating fair trade or similarly certified foods?” Price was identified as the largest barrier here. “Grad school stipend isn't enough to consistently buy high quality fair trade foods - produce is no issue though”, said one respondent. Preferences was the second-highest reason chosen. One respondent shared that “I'm a meat and potatoes guy. That ain't changing.” Another lamented that “If there were taxes/ restrictions on eating meat I would follow them, but I'm not convinced one person makes much of a difference by themselves”.

Participants were asked what barriers prevent them from being able to reduce (e.g., less packaging), reuse (e.g., travel mug), repurpose (e.g., composting) and/or recycle their waste. This was a purely open-ended question; sample responses include:

- “Lazy”
- “Some apartment complexes do not have recycling programs that allow tenants to recycle their waste.”
- “Companies packaging choices are poor for many things (single use plastic)”
- “Most of my waste comes from the lab and field work that I do for my job at VT. One use throw away sampling and processing methods tend to be cheaper and easier, which is a shame! And when working with micro-organisms, you often don't have a choice. It would be great to have a composting facility for the town. I have to do all of my composting in my backyard.”

Participants were also asked what barriers prevent them from conserving energy. As with all questions throughout this section, the rich set of responses may be found in Appendix 2 of the Engagement Subcommittee report. Sample responses include:

5-6
• “My biggest energy usage is from lab equipment and driving to field sites.”
• “Not having enough money to energy proof my place. I am trying to do what I can saving money and conserve energy.”
• “I don't have control over the excessive energy use of the building where I work. I don't have access to community-owned solar or wind power.”

A key proposal emerging from the 2020 Climate Action Commitment process is that the university shift to 100% renewable energy. Survey respondents overwhelmingly support this. When asked how important it is, ranging from not important at all (1) to top priority (5), the mean response rate was 4.48. 122 of 187 people that answered this question chose 5.

Demographics

Demographic questions were asked to get a sense of what the response pool looked like. In terms of various constituent groups, the sample was fairly well distributed - 30% are undergraduate students, 21% grad students, 16.6% teaching or research faculty, 6.4% staff, 7% alumni, 4.8% community members without VT-affiliations, 0.5% postdocs (1 person), 9% administrative & professional faculty, and 4.8% other. Based on zip code, the vast majority of respondents live in Blacksburg (at least during the academic year). Those with VT affiliations come from a very wide range of departments. Age-wise, the largest group (38%) are 18-25. Gender-wise, most respondents identify as female.

Unfortunately, there was not a good mix racially or ethnically - 81% of respondents identify as white. 7.7% identified as asian, and there were only two respondents that identify as ‘American Indian or Alaska Native’ and two as ‘Black or African American’. A very high proportion (50%) have professional or graduate degrees, underscoring how different the response poll in this university environment is from the wider public. Politically, the largest proportion (33.5%) identify as ‘liberal’ politically. 18% identify as ‘very liberal’. Only 11% identify as either conservative or slightly conservative. 15.4% identify as ‘moderate/middle of the road’.

5.3 Zoom Convening Ideas and Exit Survey

The Engagement Subcommittee sought to go beyond simply sharing information and collecting feedback to engage community members in a more deliberative process, exploring options together. The Subcommittee had originally planned to hold a face-to-face town hall event, but COVID-19 necessitated a quick pivot to virtual engagement. A series of 12 convenings were subsequently held via Zoom over a five-day period in April. There were at least 226 instances of participation across the 12 sessions, with many individual participants partaking in multiple sessions.

There were three “general” sessions and nine sessions aligned with the following VT Climate Action Commitment subcommittee topics:
• General Sessions: April 22 (21 participants), April 22 (13), and April 28 (22)
• Agriculture, Forestry & Land Use: April 27 (21)
• Building Opportunities: April 24 (13)
• Climate Justice: April 24 (17)
Although the topics differed, the process for each Zoom convening session was the same:

- Upon registration for each session, participants were invited to
  - Watch a short video produced by the associated subcommittee, and
  - Respond to the VT Climate Action Commitment survey.

- The virtual engagement sessions each lasted an hour and included the following steps:
  - Brief introductory comments by a member of the subcommittee, which included background research, preliminary findings, and proposed strategy themes;
  - Individual ideation, which was collected through a Google form and then shared back with the group;
  - Small group deliberations on one to three ideas chosen collectively within each small group, again facilitated with guiding questions provided through a Google form;
  - Small group report-outs to the larger group of participants, accompanied by some Q&A and discussions on each small groups' work; and
  - An exit survey participants were asked to complete.

Below is a synthesis of the key collective takeaways from the sessions by topical area. The Community Engagement SC report presents session-by-session results of the Convenings, including ideas generated and small group report-outs.

### 5.3.1 Climate Action Living Laboratory

This idea of a ‘living lab’ with opportunities for collaborations between campus operations, research, and teaching generated the most discussion and excitement during several of the Convening sessions. Specific opportunities were discussed relating to energy systems, renewables, buildings, waste management:

- The need to integrate sustainability into educational opportunities, and make sustainably and climate action a reason to come to VT.
- Energy showcase - senior design projects or Living Lab w/ operations to show potential donors and alumni. Signals commitment to sustainability.
- Use our green buildings as learning tools through virtual tours. Net Zero Energy Buildings + Joint Project with Students.
- Sustainability education office - Education for students, staff, and faculty. Way to foster longer-term behavior change with lasting impacts.
- Focusing on educational programs - Implement in freshmen orientation so students feel they have a part (duty) in this. Possibly a 1-credit class that all students take so they can navigate what they are interested in & opportunities to learn more. This could be a Pathways requirement.
- One group emphasized opportunities for a ‘living lab’ for new technology development, circular design, and pilot demonstrations.
• VT as a Living Lab setting an example of a healthy ecosystem, living in harmony with the region. Involve classes in sustainability implementation.
• The Living Lab is particularly exciting. It puts learning and sustainability into perspective (not just being in a green building).

5.3.2 Renewable Energy

The prospect for renewable electricity development received significant support in the general, energy, and renewables sessions. A few of the statements of support:
• Integrate renewables into building design…Install rooftop gardens and solar panels on existing and future campus buildings…Use roof space on buildings for green roofs, photovoltaics…Integrate solar panels into future building design…Put solar on every new building, and on off-campus structures too (e.g., apartment complexes)
• The need to shift to 100% renewable energy. The focus is on shifting the electricity system first, then all energy, including transportation fuels.
• More renewable electricity on campus, accelerating movement away from natural gas.
• Develop community solar project with VT Electric Service town customers
• Agrivoltaics was listed as the #2 idea for 4 out of 5 groups, with one identifying it as a viable dual use of land, educational opportunity, research funding, engineering and agriculture instructional benefits, showcase development.
• Solar was identified as a viable option by a group, and in particular on new buildings. There was some overlap with the energy opportunities session with groups flagging the need to both reduce peak demand and reduce consumption.
• Take a ‘systems approach’ that mixes micro-renewable energy generation, battery storage, and a campus and town micro-grid to increase resilience. Energy storage was also emphasized as a way to overcome current challenges with the intermittency of renewables.
• Solar from former coalfields - Seek opportunities to invest in and source solar power from photovoltaic farms built in formal coalfields as a means of jump-starting an alternative economy in lower-income communities currently dependent on climate damaging industries, stimultating industry in region…VT role in coalfields, payback to region…Revenue sharing with siting communities of renewable energy outputs to wholesale markets.

5.3.3 Transportation

Transportation issues especially alternative mobility and reducing single occupancy vehicle use were prominent topics in the transportation and general sessions. Here are some of the statements heard:
• Decarbonize transportation by enhancing alternatives besides driving solo…Need to reduce number of incoming students driving personal vehicles on-campus.
• Restrict freshman from having cars on campus - Set habits and norms early on, well supported with Blacksburg Transit, car sharing and other infrastructure.
• Expand bike lanes and paths and extend a good bike network into the community, especially to major residential neighborhoods…Enhance safety…Normalize biking over driving…Covered bike parking on campus, which incentivizes biking on campus…Collaborate with the Town of Blacksburg to improve alternative transportation infrastructure.
• Creating ‘wheel only’ sections, which permit bikes, scooters etc. (not on sidewalks).
• Move to an all-electric fleet of Blacksburg Transit (BT) buses…Expand bus routes in and around Blacksburg, Christiansburg and the New River Valley
• Reduce private vehicle access and speed limits in central areas of campus and Blacksburg
• Pedestrianize the Drillfield loop, banning and separating cars from accessing central campus during specified times, but making allowances for needs of staff and accessibility
• Increase parking fees while creating waivers or sliding scale for low wage employees for parking passes…Fewer parking spaces on campus
• Game-ify alternative transportation options on social media to make it fun for students
• Greater accountability for business air travel, given that air travel has a large carbon footprint.
• Implement more electric vehicle charging stations on campus.

5.3.4 Energy systems

There was strong support for replacing coal with natural gas in the steam plant, but also for weaning VT from natural gas.

• Strong support for eliminating coal from the steam plant right away.
• Navigating transition away from natural gas - Natural gas is not a climate-friendly solution and thus should not be seen as such. Transition from natural gas, potentially with geothermal energy
• Switch the campus (centralized) heating system to geothermal. Opportunities to go to electric heat on parts of campus as we expand, infrastructure is there already (time, energy, and money)
• Heating Buildings - Might need more expertise, maybe use a company that knows geothermal
• Use geothermal energy, while recognizing that it can be expensive as a retrofit. There may be opportunities with new buildings, including at a ‘district’ scale as the campus expands.

5.3.5 GHG emissions/inventory

The Convening GHG inventory session raised issues about GHG sources and geographic scope and the inventory process.

• GHG sources Scope boundaries (e.g., adding leased space, like the North End Center and Math Emporium).
• Include upstream methane leakage in order to put this out front for consideration
• Effectively measuring GHG emissions by, among other things, adopting and managing effective GHG accounting software, and using a standard assessment tool to measure GHG emissions
• Getting more people involved in the GHG monitoring process. Educating students, including with a ‘carbon footprint test’
• Support for the expansion of scope boundaries to inventory partner GHGs and other VT sites…Expanding the scope - Expand scope of the CAC to other campuses
5.3.6 Buildings

Ideas for buildings opportunities included using VT buildings including green labs and zero-net energy showcase building in the Living Laboratory, existing building retrofit, building real-time energy monitoring including an Energy Dashboard, and the net-zero-space-growth concept.

- Value of engaging students around green labs best practices…Energy efficiency opportunities, including through ‘greening labs.’
- Sustainable design methodologies and goals, including a ‘zero net energy’ building and integrating biophilic features. Building carbon neutral buildings (and renovations/retrofits).
- Focus on existing buildings, not just new buildings…Retrofit buildings, monitoring for efficiency…
- Lighting solutions - Lighting strategies + Include students in exploration + LED Retrofits. Improving lighting through both passive & active designs.
- Online real-time monitoring of building performance…Increase monitoring to prompt behavioral change - Improve operational efficiency and monitoring to increase knowledge and awareness of occupants…Building-level energy dashboard to encourage occupant behavior…Improve energy efficiency (reduce usage), including by improving monitoring and sharing data
- Accountability and oversight- Build a "Hokie Team" that focuses on building and energy projects
- Net zero space growth. Need to optimize space usage...Better utilization of campus space. ...Growth Plan - Net zero space growth on campus. If you tear down a building, the new one shouldn't be bigger. Keeps energy use down. Re-educate people about space as an asset, not to be wasted. Think more about shared space.

5.3.7 Agriculture and Forestry

Three issues dominated Convenings discussions related to agriculture and forestry: the proposal for the University Compost Facility at Kentland, tree policy and planting, and sustainable agriculture education.

- Broad support for much more composting as a sustainable way to manage waste…Support for a compost facility was listed as the #1 idea for 4 out of 5 groups…There is strong support for a composting facility on campus (or satellite university lands) that can serve the entire campus and Blacksburg
- Integrate with waste management with a biodigester at new compost facility
- Campus tree policy: Increase tree conservation/planting and increase coverage/canopy cover
- Sustainable agriculture and local food. Get the College of Agriculture and Life Sciences to focus research on sustainable agriculture and sustainable food systems. The integration of a living laboratory as a pathway towards making these changes using Kentland Farm and Catawba Sustainability Center

5.3.8 Waste management

Waste management including trash, recycling, composting, construction waste, and specialty waste produced several supporting ideas about operations, administration, and compost facility.
• Hire a waste consultant to conduct a campus wide waste audit…Centralize waste management operation under one unit…Hire a Full Time Waste Manager;
• Broad support for the University Compost Facility at Kentland…much more composting as a sustainable way to manage waste…Support for a compost facility was listed as the #1 idea for 4 out of 5 groups…Strong support for a composting facility on campus (or satellite university lands) that can serve the entire campus and Blacksburg.
• Improve waste management practices by improving the infrastructure across campus…Recycling bins should be separated and labeled…Better bin signage
• Get Athletics more involved in zero waste and promoting it…Host a zero waste event then enhance policies, signage training based on findings
• Integrate with waste management with a biodigester at new compost facility
• Educate students about zero waste at orientation; promote student organizations and other university events to go zero-waste, including with ‘game-ification’…Education, training, and outreach to university staff, students, faculty to ensure broad participation
• Offer composting opportunities to residence halls, with weekly collection…Decrease student waste - have to change the culture to get rid of single use plastics and disposable things…Promote student organizations and other university events to go zero-waste.
• Breakout Group Idea: Composting facility widely discussed in all groups

5.3.9 Procurement

Procurement was addressed in the waste/recycling and general sessions because of its importance to both in-flow of materials and services and out-flow of waste and recyclables.
• Sustainable purchasing policy with our office supplies, food and beverage, and all other materials to reduce packaging waste…Add an interface directly to HokieMart for sustainable products
• Procurement, purchasing things that are recyclable, sustainably made…Encouragement of "circular economy" products through procurement
• Need to integrate social justice by, among other things, adopting ethical sourcing guidelines for purchasing solar and wind tech
• Focus on lab-specific waste management
• Measurement - Life cycle analysis for purchased products. Also data dashboards displayed on campus showing energy, water, waste, and other key metrics

5.3.10 Climate Justice and social equity

Climate Justice is advanced as a core value of the CAC, and the Convening sessions provided significant support:
• Community engagement - Involve community members through focus groups on climate justice matters as well as on ethical issues…Direct engagement with underrepresented groups on campus - Importance of actively seeking diverse perspectives while not overburdening under-represented groups.
• Consider social justice implications in purchasing and all other decisions including adopting ethical sourcing guidelines for purchasing solar and wind tech
• **Affordability** - Need to improve energy efficiency at low/no cost for low-income users. Energy cost protections for low-income residents; tiered rate structures...VTES could provide incentives/support for marginalized groups to add rooftop solar

• **Repairing historical harms** - Need to bring non-profit/advocacy leaders from marginalized frontline communities into planning immediately

### 5.3.11 Sustainable Choices

Some good ideas emerged regarding campus behavior in both sustainable choices and general Convening sessions:

- The need to foster both *structural and individual behavior changes*, including through persuasive design, upping the ‘coolness factor’ of sustainability, and using a mix of incentives and disincentives (i.e., carrots and sticks)
- **Nudging** changes in transportation behaviors, including by banning freshmen from bringing cars to campus and using various prompts to encourage alternative transport
- **Gamifying Transportation** in Blacksburg - Healthy competition to motivate behavior change, builds community, better utilization of existing services, very low cost.
- **Persuasive, intentional design** - Making sustainable choices easier, e.g., safer bike options, co-benefits for other groups. Promote behavioral change through building design and operation
- **Ban stuff**: no straws, no freshman cars, meatless Mondays, travel carbon caps, no single use plastics
- **Promote stuff**: transportation alternatives, diet alternatives, nudges towards reducing energy consumption, travel, etc.
- **Student Life: Dining and Dorms** - Dining halls: composting, food waste reduction, vegetarian food option days and education for why that is.
- **Waste** - Advance and incentivize waste recycling/composting. Meet aggressive goals for zero waste, touting educational benefits.
- **Food**: Potential behavioral prompts in campus dining; *Expanding sustainable food options on campus* - Aligns well with the agricultural history of the University.

### 5.3.12 Engagement and Partnerships

Collaboration emerged as a theme in several Convening sessions. Discussion of partnerships with other VT campuses, other universities, the Town of Blacksburg, and other organizations was very useful.

- **Partnerships** with other schools (universities), branching out to other organizations in the future
- **Cross-campus coordination** - Promotes cohesion across campuses (Blacksburg, NOVA, Roanoke, and beyond)
- **Getting more of the community involved** - Improving town-gown and private businesses’ linkages to energy management. Shared projects with VT Electric is a great starting place …Need to include the whole community beyond the university’s borders
- **Direct engagement with underrepresented groups on campus** - Importance of actively seeking diverse perspectives while not overburdening under-represented groups.
5.3.13 Implementation, Administration and Financial

Some issues related to administration and finances also emerged from participant discussion, including:

- **University Administration** - Increase staff and elevate the Sustainability Office to have reporting lines to both operational and academic sides - office can serve as a bridge between these entities
- Create a revolving fund to continually finance energy efficiency projects
- **Divestment** from fossil fuels...A call for the university to take a stand, including through divestment... Get rid of coal by 2024. Divest from fossil fuels.

5.3.14 Exit survey outcomes

Participants in all 12 Zoom sessions were asked to complete an exit survey as they wrapped up. The survey had three goals: Evaluate the Zoom Convenings themselves; give participants a final opportunity to provide substantive feedback on the ideas and discussions that emerged during the session; and ask for their ideas on how engagement might take place moving forward, as the updated Climate Action Commitment is implemented.

Of the approximately 226 Zoom session participants, 98 completed exit surveys. Of those that responded, 40 identified as graduate students, 23 as undergraduate students, 17 as administrative/professional faculty, 19 as teaching and research faculty, 7 as staff, 17 as community members, and 27 as alumni. Note that N (150) is greater than the survey response rate (98) because many people identified more than one affiliation. Some also identified ‘other’ affiliations, including a few people that work for local agencies (e.g., Blacksburg Transit, regional planning commission) and a couple of retirees. While happy with participation rates overall, the relatively low number of undergraduate and staff participants underscores the need to reach out to those key constituencies as implementation moves forward.

Participants were asked what **ideas they thought were best coming out of the sessions**. Not surprisingly, their responses tend to mirror the topics that received the most attention within the sessions. A few common themes are: Better use of rooftops for both energy and greening; the need for broad engagement, including through a ‘living laboratory’; shifting to 100% renewable energy; gamification as a way to promote behavior change around transportation and in other domains; the construction of a new VT composting facility; a new campus-wide waste coordinator and regular audits; a new ‘net zero’ building, while recognizing the need to retrofit existing buildings; the need for climate justice; restricting cars further in the center of campus; not selling parking permits to new freshmen; and coordinating more frequently and deeply with the Town of Blacksburg and other local partners to more effectively achieve objectives, including but not limited to transportation and waste management goals.

The next question asked participants if they have any **concerns with ideas discussed**. Most respondents expressed no real concerns. Among those that were expressed, common themes include: Feasibility of implementing in practice, including getting resources. Some participants were clearly not aware of what has already been done; potentially significant pushback will need
be overcome, for example to implement a freshmen car ban. And the emphasis was on shiny new things (buildings, renewables projects) rather than on conservation, efficiency, and restoration.

When asked any ideas they wish had been discussed, the most common response was a desire to go into further detail on those that did come up. Unfortunately, an hour per Zoom session was not sufficient to go in depth. Some wished that we could have learned more about what other universities are doing. A few respondents wished more attention had been devoted to the justice considerations, including the implications of adopting policies. Transportation and waste reduction were also common themes, including outside of the respective sessions devoted specifically to those topics.

The Zoom Convenings were organized on a very short timeline as COVID-19 rendered previous face-to-face plans impossible. Given uncertainty around when and how we will be able to return to in-person deliberative engagements, the organizers seek to learn from these experiences. To that end, participants were asked to rate how productive the Zoom sessions were, on a scale from 1 (not at all) to 5 (extremely). The average was 4.3, indicating a very positive take on the experiences. Digging deeper, participants were asked for feedback on how the sessions could be improved. Both of the two participants that rated the productivity at ‘2’ (there were no ‘1’s) suggested that the goals should have been clearer; one lamented that their group seemed to focus on ‘old’ topics while (s)he wanted to explore new ideas. A few others felt that the sessions were too short. A couple suggested that there could have been more facilitation in the breakout groups.

When asked what other ways we could involve people in the CAC update process in these times of physical distancing, respondents felt that social media could be more effectively harnessed. Other respondents noted that Zoom sessions and other means of engagement should be better promoted, especially to students and more broadly in the community. It is too late to use that advice with the current process, but it is useful to keep in mind as implementation moves forward. More importantly, we asked respondents how the administration could best involve people in implementing the CAC moving forward. Responses included:

- Keeping everyone informed of what exactly is happening and how they can be involved through various channels, including:
  - Regular email updates
  - A strong social media presence
  - Spreading both information and engagement opportunities through classes
  - Keeping the CAC websites up-to-date
- Zoom sessions like those run here to continue the consultation process
- Expanding the network by, among other things:
  - Personally reaching out (by phone, since emails can be ignored) to ask people to be intensively involved
  - Forming strong connections with frontline communities, including with a climate justice advisory committee
  - Strengthening relationships with both community leaders (e.g., elected officials) and residents and neighbors more widely
- Ensure that there is adequate resourcing and expertise by:
  - Allocating dedicated staff resources (or faculty buyout) to support implementation
○ Finding resources to support others that engage in implementation (e.g., ‘comp’ time for faculty and staff)
○ Taking advantage of alumni, and in particular their expertise
  ● Make the carbon neutral by 2030 commitment a major part of the university’s branding in all arenas
  ● Be open, admitting and discussing challenges

In general, respondents expressed a strong desire to remain involved and see other stakeholders join the effort as implementation moves forward. It is clear that there is a strong foundation for broad community engagement in the implementation of the CAC, but that the network must be significantly expanded.

5.4 Conclusion

The extensive engagement process organized for the 2020 Climate Action Commitment update yielded important insights and provided the community with updates on the work of the group. A few new ideas emerged from participants through the survey and Zoom Convenings, which served as opportunities to assess the viability and support for various options. All signals—including the ‘climate strikes’ and governance resolutions that precipitated this work, the level of intensive involvement in the working group and various subcommittees by more than 120 students, staff, faculty, and community members, and the significant response to outreach efforts despite the pandemic—suggest that there is a strong desire to see climate action at VT and that stakeholders are keen to be involved.

Engagement should not stop with the submission of the 2020 CAC update report. Rather, this should be a living process that features ongoing opportunities for students, staff, faculty, and other stakeholders to access information on how VT is progressing against the ambitious goals, contribute and deliberate on new ideas, and find ways to get involved in implementation. The reorganized University Climate Action and Sustainability Office (CASO) and Climate Action, Sustainability, and Energy (CASE) Committee should make ongoing engagement a top priority as the CAC works through governance and hopefully moves into an implementation phase.
6. Progress in Implementing 2009 VT Climate Action Commitment

In April 2008, President Charles Steger charged the Energy & Sustainability Committee (E&SC) to develop a Virginia Tech Climate Action Commitment and Sustainability Plan (VTCAC&SP). The E&SC was formed in 2007 to address growing university needs for energy efficiency and interests in sustainability among students, faculty and staff. Because of the strong relationship to the university’s physical plant, the committee reported to the Commission on University Support. The E&SC engaged over 75 stakeholders in preparing the CAC&SP, which was approved by University Council on Earth Day, April 22, 2009, and by the Board of Visitors on June 1, 2009. While the VTCAC&SP was 100 pages with another 100 pages of appendices, the Climate Action Commitment was boiled down to 14 key elements.

In 2012-13, the E&SC decided to review the 14 elements and made minor modifications and added a sustainability definition, vision, and mission, which were approved in May 2013. The E&SC reviewed the Sustainability Plan in 2014 and made modifications that were approved in May 2014. The principal change was tying VT sustainability tracking to the nationally recognized Association for the Advancement of Sustainability in Higher Education’s (AASHE) Sustainability Tracking and Rating System (STARS).

6.1 Summary and Introduction

Virginia Tech has made considerable progress implementing its 2009/2013 Climate Action Commitment (2009 VT CAC) during the past decade. The 2009 VT CAC & Sustainability Plan was a leading effort for its time, but a decade later it falls short of both necessary action and recent initiatives of many peer universities.

Virginia Tech is a recognized leader in campus sustainability with a Sustainability Tracking and Rating System (STARS) Gold score that is highest among Virginia and ACC peer schools. VT has won numerous awards and recognitions since 2010, including Princeton Review’s top 50 Green Colleges (twice), Governor’s Environmental Excellence Award (7 times), Best Workplaces for Commuters (every year, gold in 2019-20), Bicycle Friendly Campus (every year, silver level in 2019), Tree Campus USA certification (every year), and many others.

We have reduced greenhouse gas (GHG) emissions by 24% from 2006 to 2019, despite 22% growth in campus building size and enrollment. This reduction is faster than the 2009 CAC targeted trajectory. It resulted from investments in energy efficiency in existing and new buildings, and most importantly from replacing steam plant coal with natural gas enabled by a new gas pipeline. We now have 36 LEED certified buildings constructed or in process, amounting to 30% of campus space, and in 2015-2020 we invested $14 million in energy efficiency improvements resulting in energy and dollar savings with a 5-year payback.

We have done much to develop alternative transportation choices, from bike racks and dual use trails; to bike share, ride share, car share programs; to increased ridership on our partner Blacksburg Transit; to innovative plans for campus mobility. We have a functional, although fragmented, waste management program with a 80% waste diversion rate (waste diverted from landfill) and 40% recycling rate, although shy of the 50% by 2020 goal of the 2013 VT CAC. In April 2020, our Procurement Department unveiled a Sustainable Procurement Policy, and in May, Facilities
produced new Design and Construction Building Standards, both of which reflect the ideals of the Climate Action Commitment.

We have an enviable array of sustainability-related academic programs, majors, coursework, and research, in green engineering, natural resources, energy systems, and environmental policy, and many others. In the STARS rating system, VT scores 89% of possible points in academic categories. It also scores 95% of possible points in campus engagement. We have a rich campus life for students with a wide array of opportunities, including strong environmental student organizations. Indeed, these student groups have pushed the university to move forward on climate action, both in 2008 and in 2019.

Our Facilities Department has embraced sustainability and climate action as part of its mission, and our Office of Sustainability is second to none, even with limited staff. We have the one-of-a-kind Virginia Tech Electric Service (VTES), a university-owned independent utility that serves not only campus but also 6000 Blacksburg customers.

6.2 Progress Implementing the Virginia Tech 2009 Climate Action Commitment

The 14 elements of the 2009/2013 VT CAC are given in their entirety in Table 6.1. The CAC has served the university well. But the world has changed, and in President Sand’s words, “Virginia Tech has a duty to respond.” This section reviews the progress toward meeting the VTCAC. It relies on the Sustainability Annual Reports as well as additional data and information developed by the Working Group. This review addresses the elements individually or in groups below.
**Table 6.1 Virginia Tech Climate Action Commitment, as revised May 2013**

1. Virginia Tech will be a **Leader in Campus Sustainability**. Sustainability is an integral part of the fabric of the university as it pursues enhanced economic stability and affordability, diversity and inclusion, environmental stewardship, expansion of knowledge, and education of future leaders.
2. Virginia Tech will represent the **VTCAC&SP in the university Strategic Plan**.
3. Virginia Tech will establish a target for reduction of **campus GHG emissions to 80% below 1990 emission level** of 188,000 tons by 2050, and interim targets from 2006 emissions of 316,000 tons for 2012, 295,000 tons (on path to 2025 target); for 2025, 255,000 tons (2000 emission level); and for 2050, 38,000 tons (80% below 1990 emission level).
4. Virginia Tech will work toward these emission reduction targets **through improved energy efficiency, reduction of energy waste, replacement of high-carbon fuels**, and other measures identified in the VTCAC&SP.
5. Virginia Tech will maintain a **sustainability office** to:
   a. Coordinate programs for campus sustainability;
   b. Oversee implementation of the VTCAC&SP;
   c. Monitor annual electricity and other energy use and GHG emissions;
   d. Working with faculty and departments, manage a campus-wide student internship and undergraduate research program using the campus as a sustainability laboratory; and
   e. Coordinate communication regarding campus sustainability initiatives and programs to the university community and external audiences.
6. Virginia Tech will improve the sustainability of its **built environment** by:
   a. Achieving **LEED Silver certification or better** for all eligible & applicable new buildings and major renovations;
   b. Evaluating the feasibility of LEED for Existing Buildings certification for its existing buildings.
7. Virginia Tech will **improve electricity and heating efficiency of campus facilities** and their operations by:
   a. Exceeding the most current version of ASHRAE 90.1 energy performance by 10% for all new buildings and major renovations. Capital budgets should account for future energy price, life cycle cost of building operation, and environmental benefits of achieving this level of performance;
   b. Improving the heating and cooling infrastructure and operation, lighting efficiency, equipment efficiency, and metering and controls of its existing buildings.
8. Virginia Tech will **minimize waste and achieve a 50% recycle rate by 2020**.
9. Virginia Tech will:
   a. Require **purchase or lease of Energy Star rated equipment** and maximum practicable recycled content paper, in accordance with University Policy 5505, with exceptions for special uses;
   b. Consider a product’s life cycle cost and impact when making purchasing decisions.
10. Virginia Tech will **engage students, faculty, and staff** through education and involvement to develop and implement innovative strategies for efficient and sustainable use of energy, water, and materials in all university-owned facilities.
11. Virginia Tech will **improve transportation energy efficiency** on campus through parking, fleet, and alternative transportation policies and practices. The university will continue to implement programs that encourage the use of alternative transportation methods and will continue to implement programs and services that promote eco-responsible fleet management.
12. Virginia Tech will continue to **develop and implement innovative sustainability-related academic programs** in instruction, research, and outreach, and will coordinate and communicate these programs to the university community and external audiences.
13. Virginia Tech will **monitor energy use and GHG emissions** as well as changing internal and external conditions, prepare an annual 'report card' showing progress towards targets, and periodically re-evaluate targets, making adjustments to targets as appropriate based on changing internal and external conditions and evolving technologies.
14. Virginia Tech will work to **provide funding to support sustainability programs**. With regard to all the items in this resolution, major personnel and investment decisions, including capital projects, associated with implementing the VTCAC&SP will be based on a joint review of costs and benefits by university financial and facilities staff and be subject to availability of funds.

6-3
6.2.1

VTCAC #1: Virginia Tech will be a Leader in Campus Sustainability. Sustainability is an integral part of the fabric of the university as it pursues enhanced economic stability and affordability, diversity and inclusion, environmental stewardship, expansion of knowledge, and education of future leaders.

Virginia Tech has continued to be recognized as a campus sustainability leader. Table 2.1 lists the numerous sustainability-related awards and recognitions received in 2010-20. Prominent among them are the 2019 APPA Sustainability Innovation Award For Facilities Management, the Princeton Review "Top 50 Green Colleges" Ranking, several Governor’s Environmental Excellence Awards (including gold in 2011 and 2013), and AASHE STARS Gold Rating in 2014 and 2017.

Table 6.1. Virginia Tech, Leader in Campus Sustainability: Selected Awards and Recognition, 2010-2020

<table>
<thead>
<tr>
<th>Year</th>
<th>Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-20</td>
<td>2019 APPA Sustainability Innovation Award For Facilities Management</td>
</tr>
<tr>
<td></td>
<td>Princeton Review &quot;Top 50 Green Colleges&quot; Ranking #14</td>
</tr>
<tr>
<td></td>
<td>Best Campus Food in America, #2 Ranking, Niche</td>
</tr>
<tr>
<td></td>
<td>Best Workplaces for Commuters, Gold Level</td>
</tr>
<tr>
<td></td>
<td>Sierra Club 2019 Cool Schools Ranking</td>
</tr>
<tr>
<td></td>
<td>Tree Campus USA Certification (received every year 2010-2020)</td>
</tr>
<tr>
<td></td>
<td>Princeton Review Guide to Green Schools List (received every year 2010-2020)</td>
</tr>
<tr>
<td></td>
<td>Best Workplaces for Commuters Gold Rating (received every year 2010-2020)</td>
</tr>
<tr>
<td>2018-19</td>
<td>Governor’s Environmental Excellence Award, Honorable Mention, &quot;Sustainability Program&quot;</td>
</tr>
<tr>
<td></td>
<td>AASHE 2018 Sustainable Campus Index</td>
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<tr>
<td></td>
<td>Sierra Club 2018 Cool Schools Ranking</td>
</tr>
<tr>
<td></td>
<td>The Best College Dining Program in Each State, FoodService Director</td>
</tr>
<tr>
<td>2017-18</td>
<td>STARS Gold Rating from AASHE</td>
</tr>
<tr>
<td></td>
<td>Governor’s Environmental Excellence Award, Honorable Mention, &quot;Reusable To-Go Program&quot;</td>
</tr>
<tr>
<td></td>
<td>Top 10 Best Universities for Healthy Eaters, Healthline</td>
</tr>
<tr>
<td>2016-17</td>
<td>Governor’s Environmental Excellence Award, Silver, “Sustainability Week”</td>
</tr>
<tr>
<td>2015-16</td>
<td>NACU Food Service Sustainability award for Reusable To-Go container program</td>
</tr>
<tr>
<td>2014-15</td>
<td>Governor’s Environmental Excellence Award, Bronze, “Student Engagement Programming”</td>
</tr>
<tr>
<td></td>
<td>STARS Gold Rating from AASHE</td>
</tr>
<tr>
<td>2013-14</td>
<td>Governor’s Environmental Excellence Award, Silver, “Dining Services Sustainability Programs”</td>
</tr>
<tr>
<td></td>
<td>STARS Silver Rating from AASHE</td>
</tr>
<tr>
<td></td>
<td>RecycleMania Pledge Recycling Drive Champions</td>
</tr>
<tr>
<td></td>
<td>America Recycles Day Photo Contest First Place</td>
</tr>
<tr>
<td></td>
<td>Keep America Beautiful Recycling Bin Grant Recipients</td>
</tr>
<tr>
<td></td>
<td>USGBC Best of Green Schools, Best Collaboration, “Sustainability Week Program”</td>
</tr>
<tr>
<td></td>
<td>RecycleMania Case Study Competition, First Place, “Caught Green Handed Selfies”</td>
</tr>
<tr>
<td>2012-13</td>
<td>Governor’s Environmental Excellence Award, Gold, “Sustainability Program”</td>
</tr>
<tr>
<td></td>
<td>Princeton Review Guide to Green Schools Honor Roll—Top 16 Schools</td>
</tr>
<tr>
<td>2011-12</td>
<td>STARS Silver Rating from AASHE</td>
</tr>
<tr>
<td>2010-11</td>
<td>Governor’s Environmental Excellence Award, Gold, “Sustainability Plan Implementation”</td>
</tr>
<tr>
<td></td>
<td>Tree Campus USA Certification (received every year through 2019-20)</td>
</tr>
<tr>
<td></td>
<td>Princeton Review Guide to Green Schools List (received every year through 2019-20)</td>
</tr>
<tr>
<td></td>
<td>Best Workplaces for Commuters Gold Rating (received every year through 2019-20)</td>
</tr>
</tbody>
</table>
The Association for the Advancement of Sustainability in Higher Education (AASHE) monitors and evaluates college sustainability programs. AASHE’s Sustainability Tracking, Assessment & Rating System (STARS) is used to assess sustainability progress. More than 400 institutions have earned a STARS rating, making the program the most widely-recognized framework in the world for publicly reporting comprehensive information related to a college or university’s sustainability performance. Participants report achievements in five overall areas: academics, engagement, operations, planning and administration, and innovation and leadership.

This program is open to all institutions of higher education. Because STARS ratings are based on credits earned and are transparent and accessible, the program allows for both internal comparisons as well as comparisons among similar institutions. The STARS protocol consists of over 60 topical areas (credits). Data and information submitted are measured against a national standard. Points are earned for each credit. Total points yield an overall rating, Platinum, Gold, Silver, or Bronze.

In 2013, Virginia Tech adopted the AASHE STARS protocol as the foundation of its Sustainability Plan. Virginia Tech has received 4 STARS ratings (2011: Silver; 2013: Silver; 2014: Gold; and 2017: Gold). For the 2017 Gold rating, Virginia Tech earned 71.94 points, which at that time represented the highest achieved for any college or university in the Commonwealth of Virginia, and the highest achieved by peer institutions in the Atlantic Coast Conference. The STARS Gold Rating is good for three years.

VT has received its high rating based on excellent results in Academics and Engagement scoring 87% of possible points and in Coordination/Planning and Diversity/Affordability scoring 90%. However, in specific criteria related to climate change, VT has not fared so well: Operations overall was 43%, drawn down by Air & Climate (23%), Energy (21%), and Food and Dining (25%). A 2% score in Investment & Finance was due to lack of information on investment portfolio of the Foundation.

### Table 6.2. 2017 Virginia Tech STARS Score

<table>
<thead>
<tr>
<th>Topical Areas (Credits)</th>
<th>Points Earned</th>
<th>Maximum Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academics</td>
<td>51.45</td>
<td>58</td>
<td>89%</td>
</tr>
<tr>
<td>Curriculum</td>
<td>35.01</td>
<td>40</td>
<td>88%</td>
</tr>
<tr>
<td>Research</td>
<td>16.44</td>
<td>18</td>
<td>91%</td>
</tr>
<tr>
<td>Engagement</td>
<td>34.89</td>
<td>41</td>
<td>85%</td>
</tr>
<tr>
<td>Campus Engagement</td>
<td>20.00</td>
<td>21</td>
<td>95%</td>
</tr>
<tr>
<td>Public Engagement</td>
<td>14.89</td>
<td>20</td>
<td>74%</td>
</tr>
<tr>
<td>Operations</td>
<td>29.40</td>
<td>69</td>
<td>43%</td>
</tr>
<tr>
<td>Air &amp; Climate</td>
<td>2.52</td>
<td>11</td>
<td>23%</td>
</tr>
<tr>
<td>Buildings</td>
<td>4.25</td>
<td>8</td>
<td>53%</td>
</tr>
<tr>
<td>Energy</td>
<td>2.12</td>
<td>10</td>
<td>21%</td>
</tr>
<tr>
<td>Food &amp; Dining</td>
<td>2.00</td>
<td>8</td>
<td>25%</td>
</tr>
<tr>
<td>Grounds</td>
<td>1.88</td>
<td>3</td>
<td>63%</td>
</tr>
<tr>
<td>Purchasing</td>
<td>4.59</td>
<td>6</td>
<td>77%</td>
</tr>
<tr>
<td>Transportation</td>
<td>3.90</td>
<td>7</td>
<td>56%</td>
</tr>
<tr>
<td>Waste</td>
<td>5.29</td>
<td>10</td>
<td>53%</td>
</tr>
<tr>
<td>Water</td>
<td>2.85</td>
<td>6</td>
<td>48%</td>
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<tr>
<td>Planning &amp; Administration</td>
<td>20.14</td>
<td>32</td>
<td>63%</td>
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<tr>
<td>Coordination &amp; Planning</td>
<td>7.75</td>
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<td>97%</td>
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<tr>
<td>Diversity &amp; Affordability</td>
<td>8.42</td>
<td>10</td>
<td>84%</td>
</tr>
<tr>
<td>Investment &amp; Finance</td>
<td>0.12</td>
<td>7</td>
<td>2%</td>
</tr>
<tr>
<td>Wellbeing &amp; Work</td>
<td>3.85</td>
<td>7</td>
<td>55%</td>
</tr>
<tr>
<td>Innovation &amp; Leadership</td>
<td>4.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6.2.2

VTCAC #2: Virginia Tech will represent the VTCAC&SP in the university Strategic Plan

In 2009, the committee wanted the university to formally recognize the Climate Action Commitment in the Strategic Plan that was revisited a few years earlier. The Plan had not mentioned sustainability previously, and the committee wanted reference. Thereafter, university plans have represented the CAC in general terms, and the president’s annual report often highlighted sustainability accomplishments. But strategic planning changed in subsequent years and other plans including a variety of master plans were more specific to the needs of the CAC.

The latest Strategic plan The Virginia Tech Difference: Advancing Beyond Boundaries, approved in June 2019, recognizes the 2009/2013 CAC in Strategic Priority 4:

Approved by the Board of Visitors on June 1, 2009, the Virginia Tech Climate Action Commitment envisions Virginia Tech as a model community for a sustainable society. The Virginia Tech Climate Action Commitment affirms that Virginia Tech will be a leader in campus sustainability and outlines several goals and milestones for improving sustainability. Areas of focus include reducing emissions, improving sustainability of the built environment, minimizing waste, and improving electricity, heating, and transportation efficiency. Virginia Tech engages and involves the university community in these efforts through multiple activities including the development and implementation of sustainability-related academic programs and innovative strategies for efficient and sustainable use of energy, water, and materials in all university owned facilities.

The Campus Master Plan Beyond Boundaries 2018, approved November 2018, gets more specific. It includes a network of amenities and services designed to improve the student experience; an integrated approach to accessibility and mobility; and a series of mixed-use districts featuring new cross-disciplinary academic, research, and partnership facilities. It has five overarching goals (1) enhance learning and research environments; (2) expand strategic partnerships; (3) protect the land grant legacy; (4) facilitate accessibility and mobility; and (5) foster an inclusive campus experience. Still pretty general, but it gets more specific in the Sustainability Outcomes section. The intent is to

- Minimize consumption of natural land and reduce vehicular emissions via a land use strategy focusing on infill development rather than sprawl (including a growth boundary established by the proposed Western Perimeter Road);
- Reduce vehicular emissions via an alternative transportation-focused mobility system (e.g. transit, walking, bicycles), the relocation of parking to the perimeter of campus, and the construction of a transit hub at the academic core;
- Advance green stormwater and carbon sequestration efforts through strategic reforestation along major campus corridors and the integration of substantial landscape elements into the proposed accessible pathway system (particularly the Green Links);
- Conserve energy by promoting energy-efficient building siting and design, as well as conversion to alternative energy sources (in keeping with the university’s climate action commitment).

This reference is the most specific reference to the 2009/2013 CAC of any university plan to-date. But other more focused plans and standards have embraced the spirit and intent of the CAC, including the Parking and Transportation Master Plan (2014), the Five-Year Energy Management Plan (2015), the Bicycle Parking Master Plan, the Electric Vehicle Master Plan, among others. And other related plans are in the works and have been embraced by our current 2020 VT CAC,

6.2.3

**VTCAC #5:** Virginia Tech will maintain a sustainability office to:
- Coordinate programs for campus sustainability;
- Oversee implementation of the VTCAC&SP;
- Monitor annual electricity and other energy use and GHG emissions;
- Working with faculty and departments, manage a campus-wide student internship and undergraduate research program using the campus as a sustainability laboratory; and
- Coordinate communication regarding campus sustainability initiatives and programs to the university community and external audiences.

**VTCAC #13:** Virginia Tech will monitor energy use and GHG emissions as well as changing internal and external conditions, prepare an annual 'report card' showing progress towards targets, and periodically re-evaluate targets, making adjustments to targets as appropriate based on changing internal and external conditions and evolving technologies.

The Sustainability Office had been initiated before the 2009 CAC&SP, but element #5 was intended to define its mission and to firmly establish it in university organizational structure and governance. Over the last decade, it has been one of the most successful outcomes of the VT CAC&SP, largely as a result of its long time head, Denny Cochrane.

With a staff of two plus a graduate assistant, the office has provided all of the specified duties listed above, although it leans on the energy manager’s office for data on energy and GHG emissions. The Office is instrumental in nominating the university for various sustainability recognitions, operates the very successful sustainability internship program and Green RfP program, and performs the Herculean task of preparing and submitting data and information for the AASHE STARS rating system, which as discussed previously, is critical to Virginia Tech’s standing in sustainability.

The Sustainability Internship Program and Green RfP Programs are worth highlighting. For many years, the office has accepted 20 students each year to create lasting, sustainable change at VT while developing professional skills through experiential learning. The program uses the campus and the community as a living-learning laboratory.

The Sustainability Office and the Energy & Sustainability Committee (E&SC) operate the Green RfP program, which funds student-proposed sustainability projects on campus. From 2010-2019, the university has provided more than $1 million to support these projects, giving students an important voice in campus sustainability and climate action.

The Office of Sustainability prepares the Sustainability Annual Report, the “annual report card” of element #13. It gives a comprehensive assessment of annual progress of the CAC element by element. The report is mainly descriptive and complimentary of VT progress, but the effort resulted in a re-evaluation and revision of the 2009 CAC in 2013. The revision process by a subcommittee of the E&SC mostly validated the elements with a few changes including shortening the deadline for achieving 50% waste recycling rate from 2025 to 2020. The following year, the Sustainability Plan was revised by embracing the AASHE STARS protocol as the principal means of monitoring VT sustainability progress.
6.2.4  
VTCAC #3: Virginia Tech will establish a target for reduction of campus GHG emissions to 80% below 1990 emission level of 188,000 tons by 2050, and interim targets from 2006 emissions of 316,000 tons for 2012, 295,000 tons (on path to 2025 target); for 2025, 255,000 tons (2000 emission level); and for 2050, 38,000 tons (80% below 1990 emission level).

Figure 6.1 from VT Facilities Office graphs the VT GHG calendar year emissions against this commitment. From this plot, it is seen that VT has already met the 2025 target. It should be noted that the data in Figure 6.1 includes the addition of new buildings on campus over time. Table 6.3 below shows the main campus building gross square footage (gsf) and the student body enrollment for the first year of the GHG inventory and 2019. GHG emissions have dropped 24% while campus gsf and enrollment increased 22%. Figure 6.2a gives emissions 2011-19 and Figure 6.2b normalized the data to campus square footage to show GHG intensity.

<table>
<thead>
<tr>
<th>Table 6.3 VT Campus Emissions, Square Footage, Enrollment</th>
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<tr>
<td><strong>Year</strong></td>
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<tr>
<td>GHG Emissions (tons CO₂)</td>
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<tr>
<td>Main Campus Square Footage (ft²)</td>
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<tr>
<td>Main Campus Enrollment</td>
</tr>
</tbody>
</table>

Figures 6.1: GHG Emissions Progress
Figure 6.3 gives GHG sources in 2019. Purchased electricity from APCO is the dominant source of GHG emissions at 52%, with coal and natural gas in the steam plant 34%, and other natural gas 3%. Transportation fuel for commuting and VT operations is about 8%.

The good news from Figure 6.1 is that despite significant growth in enrollment and building area (+20+%) Virginia Tech has reduced its absolute CO\(_2\) emissions (-20+%) to 2019 at a rate faster than the trajectory to the 2009/2013 VTCAC interim goal for 2025, and indeed is 5% below that goal six years early. The reasons for the decline are because efficiency improvements and fuel switching related to VTCAC #4, 6, and 7.
6.2.5

**VTCAC #4** Virginia Tech will work toward these emission reduction targets through improved energy efficiency, reduction of energy waste, replacement of high-carbon fuels, and other measures identified in the VTCAC&SP.

**VTCAC #6** Virginia Tech will improve the sustainability of its built environment by:

- Achieving **LEED Silver certification or better** for all eligible and applicable new buildings and major renovations;
- Evaluating the feasibility of LEED for Existing Buildings certification for its existing buildings.

**VTCAC #7** Virginia Tech will improve **electricity and heating efficiency** of campus facilities and their operations by:

- Exceeding the most current version of **ASHRAE 90.1 energy performance by 10%** for all new buildings and major renovations. Capital budgets should account for future energy price, life cycle cost of building operation, and environmental benefits of achieving this level of performance;
- Improving the heating and cooling infrastructure and operation, lighting efficiency, equipment efficiency, and metering and controls of its existing buildings.

There are three primary reasons for the 24% reduction of campus GHG emissions from 2006 to 2019 despite a 20% increase in square footage and enrollment:

1. Fuel switching from mostly coal to mostly natural gas in the steam plant,
2. APCO’s electricity fuel mix becoming less carbon-intensive,

### 1. Fuel Switching from Coal to Natural Gas in the VT Steam Plant, Steam Plant Upgrades

Virginia Tech’s nearly 1 trillion Btu/year steam plant has long provided central steam to heat most of the campus and cogenerated about 10% of VTES electricity. Coal was the primary fuel until 2015 when Tech worked with ATMOS Energy to install a larger gas pipeline to the plant, and natural gas has become the plant’s primary fuel. This conversion and its effects are described in Figure 6.4a-d. Between 2009-10 and 2018-19 coal use declined 79% (Figure 6.4a). In 2009-10, natural gas supplied only 3% of steam plant fuel; in 2018-19 it supplied 80% and it 2019-20 93% (6.4b, 6.4d). This has led to a significant reduction of steam plant CO₂ emissions per campus gsf, down 41% from 2009-10 to 2018-19 (6.4e). Steam plant CO₂ of 140,000 tons in 2009-10 halved to 72,000 tons in 2019-20.

In addition to fuel switching, the steam plant fuel use has become more efficient through replacing old boilers with new, efficient gas boilers. While this is all good news, future GHG reduction from fuel switching is limited as we are close to full conversion to natural gas.

### 2. APCO Electricity Fuel Mix from 90% coal to 63% coal

VTES buys 90% of our electricity from APCO. The utility and its parent American Electric Power (AEP) are converting from coal to cleaner fuels. APCO’s fuel mix was 90%+ coal in 2006 and 63% in 2018, with continuing movement from coal to renewables according to plans of APCO’s parent AEP. Figure 6.5 shows overall AEP fuel mix in 1999, 2005, and 2019, and “Future” fuel mix with expected changes for 2030. APCO’s fuel mix now is more coal and carbon intensive (1.57 lbCO₂/kWh) than AEP system-wide (1.38 lbCO₂/kWh), so APCO’s future may have slightly more coal than Figure 6.5. However, Virginia’s Clean Economy Act enacted in 2020 will accelerate APCO’s movement to renewables, requiring 30% renewables by 2030 and 100% renewables by 2050. The greater APCO’s renewable mix, the lower are VT’s GHG emissions and the less renewables we have to build/buy.

6-10
Figure 6.4a-d: Steam Plant Fuel and CO₂ Emissions, 2009-2019

Figure 6.5: Transforming AEP’s Power Plant Fleet for a Clean Energy Future

2019 includes expected capacity as of year-end 2019. Future includes IRP forecasted additions and retirements through 2030. Energy Efficiency/Demand Response represents avoided capacity rather than physical assets.

3a. The 2009 VTCAC item #6 required all new VT buildings and major renovations, including E&G and auxiliary buildings, to be built to **LEED-Silver standards** and to meet **ASHRAE 90.1 energy performance + 10%**. Figure 6.6a gives the 2-25-2020 status of VT LEED projects about 3.1 million ft² or 30% of campus building space. Figure 6.6b illustrates 16 of VT’s LEED certified buildings.

LEED standards are continually upgraded and the latest version is LEED 4.0. To achieve Silver rating, projects must score 50-59 points out of a possible 110. Zero-point prerequisite for Silver is to exceed ASHRAE 90.1 by 5%. The largest single category is Energy & Climate (E&C, 33 points) and the largest single criterion in that category is Optimize Energy Performance (OEP, 18 points). To get just half of the OEP points requires demonstrating 22% better energy performance over baseline code building. There are other categories and criteria to get LEED points, but it is difficult to achieve Silver status without scoring well in OEP, which requires significant energy performance above code.

Figure 6.6a. VT LEED Project Status as of 2-25-2020. Figure 6.6b. 16 LEED Buildings, 2010-18

<table>
<thead>
<tr>
<th>Number of Buildings</th>
<th>Gross Sq. Ft. (GSP)</th>
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</thead>
<tbody>
<tr>
<td>Projects Completed:</td>
<td></td>
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<tr>
<td>✔ LEED Certification - Attained</td>
<td>16</td>
</tr>
<tr>
<td>✔ LEED Certification - Pending</td>
<td>7</td>
</tr>
<tr>
<td>Projects under Construction:</td>
<td></td>
</tr>
<tr>
<td>✔ LEED Registered</td>
<td>5</td>
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<tr>
<td>Projects under Design:</td>
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<tr>
<td>✔ LEED Registered</td>
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<tr>
<td>✔ LEED Registration Pending:</td>
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<tr>
<td>✔ LEED Registered</td>
<td>4</td>
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<tr>
<td>Total:</td>
<td>36</td>
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</tbody>
</table>
3b. Energy efficiency and reduced emissions in new buildings are essential, but to reduce overall emissions we must address efficiency of our existing buildings. In 2015-16, the Facilities Department conducted a benchmarking analysis of campus buildings and identified about fifty energy intensive buildings or “energy hogs”. Representing only 35% of the university’s grounds, these facilities collectively account for approximately 70% of campus utility costs.

In 2015, VT initiated a Five-Year Energy Management Plan, 2015-2020 to focus on ten of these buildings per year and make other improvements for metering and chiller efficiency. Now in its fifth year, the program has invested $14.2 million or about $3 million per year and resulted in energy savings that are estimated to pay back the investment in 5.3 years, as shown in Figure 6.7, which anticipates 2020 projects. Many of these improvements will have a 10-20 year life. Projects included LED lighting retrofits, new steam meters on buildings, retro-commissioning (thorough inspection of old building systems), and putting more buildings on energy monitoring software, among others.

Figure 6.7 Five-year Energy Management Plan, 2015-2020: Estimated/As-built Costs, Savings, Payback

<table>
<thead>
<tr>
<th>Energy Conservation Measure/Program</th>
<th>Estimated Costs, $</th>
<th>Estimated Savings, $</th>
<th>As-built Costs, $</th>
<th>As-built Savings, $</th>
<th>Payback, Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement various energy retrofit projects identified in Phase 1</td>
<td>1,975,000</td>
<td>295,000</td>
<td>1,917,790</td>
<td>337,691</td>
<td>5.7</td>
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<tr>
<td>Implement various energy retrofit projects identified in Phase 2</td>
<td>2,700,000</td>
<td>645,000</td>
<td>2,353,734</td>
<td>581,905</td>
<td>4.4</td>
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<tr>
<td>Implement various energy retrofit projects identified in Phase 3</td>
<td>2,535,000</td>
<td>710,000</td>
<td>1,841,609</td>
<td>594,694</td>
<td>4.4</td>
</tr>
<tr>
<td>Implement various energy retrofit projects identified in Phase 4</td>
<td>2,200,000</td>
<td>540,000</td>
<td>1,686,081</td>
<td>315,506</td>
<td>5.3</td>
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<tr>
<td>Implement various energy retrofit projects identified in Phase 5</td>
<td>1,750,000</td>
<td>425,000</td>
<td>1,676,124</td>
<td>309,140</td>
<td>5.4</td>
</tr>
<tr>
<td>Install new steam meters in the buildings</td>
<td>1,985,000</td>
<td>255,000</td>
<td>2,024,140</td>
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<tr>
<td>Integrate more buildings to ICCNICS</td>
<td>775,000</td>
<td>320,000</td>
<td>751,067</td>
<td>0</td>
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<tr>
<td>Retro-commissioning program</td>
<td>840,000</td>
<td>315,000</td>
<td>624,057</td>
<td>539,054</td>
<td>1.2</td>
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<tr>
<td>Sternett PV Rooftop Solar Project</td>
<td>1,130,000</td>
<td>59,500</td>
<td>1,070,500</td>
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<tr>
<td>Part-time Student/Engineer + Auditor/Field Controls Tach</td>
<td>480,000</td>
<td></td>
<td>-</td>
<td>277,155</td>
<td>0</td>
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<tr>
<td>TOTAL</td>
<td>16,370,000</td>
<td>3,564,500</td>
<td>14,203,831</td>
<td>2,677,989</td>
<td>5.3</td>
</tr>
</tbody>
</table>

The last year of the Five-year Energy Management Plan is this year 2020. The success of the program is apparent in Figure 6.8a-c below, which shows VT annual electricity usage and campus growth in building area from 2006 to 2019. F.6.8a gives electricity use for all buildings: it increased significantly from 2006 to 2015, but has declined sharply since 2015, despite continued campus growth. This decline is largely due to the Five-Year Energy Plan. The effect of the plan is even more dramatic as shown in F.6.8b and 6.8c, which show the same data but for E&G buildings (6.8b) that have been part of the Five-year Plan and Auxiliary buildings (6.8c) that have not been. E&G buildings electricity use has fallen sharply since the Plan started. Auxiliary buildings have risen.

The figures also show, in blue, the goal of the Governor’s Executive Order 43 calling on all state agencies to reduce their electricity consumption in 2022 by 10% compared to 2006. VT has some work to do to achieve this 2022 goal. Upgrading the Energy Management program is essential and a similar program needs to be implemented on Auxiliary buildings probably using a different financing mechanism.
3c. Chiller efficiency planning

The steam plant provides heating, but cooling is provided by the campus chiller network. As shown
in Table 6.2a, chillers consume about 16% of total campus electricity. There are two central chillers, others serving more than one building, and several serving individual buildings, as shown in Table 6.2b. Facilities has been studying means of improving efficiency, which can be achieved with efficiency improvements and shifting more buildings to central chillers.

<table>
<thead>
<tr>
<th>Table 6.2a Chiller Electricity Consumption</th>
<th>Table 6.2b Chiller Data</th>
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</thead>
<tbody>
<tr>
<td><strong>Summary - 2016-2019 Annual Average Chiller Electric Consumption</strong></td>
<td></td>
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<tr>
<td>Chiller Electric Accounts</td>
<td>23,398,346 kWh</td>
</tr>
<tr>
<td>Estimated Chiller Electric Usage from Building</td>
<td>10,029,662 kWh</td>
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<tr>
<td>Other Chillers Estimated</td>
<td>91,000 kWh</td>
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<tr>
<td><strong>Total Chiller Estimated Usage</strong></td>
<td><strong>33,519,008 kWh</strong></td>
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<tr>
<td>Total Annual Electric Bill - E&amp;G &amp; Aux 4-Year Avg</td>
<td>212,598,203 kWh</td>
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<tr>
<td>Chiller % of E&amp;G &amp; Auxiliary Buildings Bills</td>
<td>15.77%</td>
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</tbody>
</table>

**VPI & SU CHILLER SUMMARY**

<table>
<thead>
<tr>
<th>Location</th>
<th>Capacity (tons)</th>
<th>Lane End Zone</th>
<th>Lane West #1</th>
<th>Lane West #2</th>
<th>Litton Reaves (Process)</th>
<th>McComas #1</th>
<th>McComas #2</th>
<th>McComas #3</th>
<th>Merryman</th>
<th>New Residence Hall West</th>
<th>Owens #1</th>
<th>Owens #2</th>
<th>Pamplin #1</th>
<th>Pamplin #2</th>
<th>Plantation Road - ARDF</th>
<th>Plantation Road - ARDF</th>
<th>Sandy</th>
<th>Southwest Chiller Plant #1</th>
<th>Southwest Chiller Plant #2</th>
<th>Southwest Chiller Plant #3</th>
<th>Squires #1</th>
<th>Squires #2</th>
<th>Vet IDU</th>
<th>Vet Med #1</th>
<th>Vet Med #2</th>
<th>Vet Med #3</th>
<th>Visitor Center</th>
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Serves multiple buildings
The Virginia Tech Design and Construction Standards (DCSM) is a continually revised document to keep up with increasing sustainability goals and requirements as well as the ever-changing construction industry. The DCSM is required for all Virginia Tech projects, both capital and non-capital. One of the requirements set forth in the DCSM is to follow the Virginia Tech Climate Action Commitment (CAC) and its goals and standards. This requirement allows Virginia Tech to modify our sustainability goals through the CAC and the DCSM will stay on target for designers and contractors. The DCSM also has specific requirements that are in conjunction with the goal of the CAC, such as a minimum of LEED-Silver being the standard for sustainability on new buildings. This standard brings in all different aspects of sustainability and keeps Virginia Tech at the forefront of green building development.

6.2.6
**VT CAC #8:** Virginia Tech will minimize waste and achieve a 50% recycle rate by 2020.

Figure 6.9 gives Virginia Tech’s recycling progress since 2004. In 2004, Virginia Tech had a recycling rate of 18% and doubled it by 2009. The 2009/2013 Virginia Tech Climate Action Commitment (VTCAC) Point #8 stated: “Virginia Tech will adopt a goal of 35% recycle rate by 2012 and 50% by 2025.” By 2012, the rate had increased to 44% as a result of food waste composting, so the 2013 revision to the VTCAC moved up the target date for 50% recycling rate from 2025 to 2020.

However, the recycling rate peaked at 44% in 2012, and subsequently dropped mostly due to the unexpected 2015 closing of the Poplar Manor Enterprises composting facility, located in nearby Riner. It took two years to establish a composting contract with Royal Oak Farm (ROF), 77 miles from Blacksburg, the only permitted composting facility within 100 miles of Virginia Tech.

In 2019 the university generated 2,031 tons of principal recyclable materials (PRMs), and achieved a 39% recycle rate. Our food waste composting (566 tons) represents nearly 28% of our PRMs. Our waste diversion rate was 80%, including Hokie Stone waste rock crushed to usable gravel.

![Figure 6.9 Virginia Tech Recycling Rate 2004-2019](image-url)
Despite the dip in recycling rate, Virginia Tech has made considerable improvements in waste management since 2009. Management is functional but is complex and fragmented across a number of departments, including Facilities Building & Grounds (trash and recycling from all buildings), Dining Services (food waste composting from 11 dining halls), Environment Health & Safety (hazardous and electronic waste), animal waste by relevant departments, Procurement for disposition of surplus property, and construction contractors for construction waste.

Virginia Tech partners with local jurisdictions in the Montgomery Regional Solid Waste Authority (MRSWA), through which solid waste is sent to the New River Resource Authority’s landfill near Dublin and principal recyclable materials (PRM) are sent to Recycling and Disposal Solutions in Roanoke. Food waste composting, considered a recyclable material, is transported 77 miles to Royal Oak Farm (ROF) near Lynchburg.

While waste management at Tech is functional, there are notable opportunities for more efficient organization and management of trash, recycling, food waste, and other wastes. A big upgrade would be a University compost facility to process all campus food waste and animal and other organic waste.

6.2.7
VTCAC #9 Virginia Tech will:
- Require purchase or lease of Energy Star rated equipment and maximum practicable recycled content paper, in accordance with University Policy 5505, with exceptions for special uses;
- Consider a product’s life cycle cost and impact when making purchasing decisions.

Policy 5505 reinforced CAC #9 on procurement and the University made progress in centralizing recycled paper purchasing and purchasing Energy Star equipment. Procurement Department also handles surplus property and Hokie Swap and Surplus that facilitates reuse of office furniture and equipment. In 2019, Procurement initiated development of a Sustainable Procurement Policy that aimed to conform to the goals of the 2009/2013 VT CAC. It was adopted in April 2020.

6.2.8
VTCAC #11: Virginia Tech will improve transportation energy efficiency on campus through parking, fleet, and alternative transportation policies and practices. The university will continue to implement programs that encourage the use of alternative transportation methods and will continue to implement programs and services that promote eco-responsible fleet management.

Alternative Transportation began in 2007 as a subsidiary of Parking Services, and became an independent department in 2015 within Virginia Tech Parking and Transportation. In close coordination with partners, the program provides a robust array of travel options and resources, targeted at reducing single-occupancy vehicle (SOV) reliance on campus. Many of those options have been added since the first Climate Action Commitment (CAC) was adopted.

These options include:
- **Carsharing** (first offered in 2013, now 3-5 Zipcars on campus with over 2,000 active members).
- **Ridesharing** (first offered in 2012, now provided locally through RIDE Solutions, who also manages the region’s Guaranteed Ride Home Program.
- **Blacksburg Transit** (Town of Blacksburg)
  - Prepaid for students through student fee and for employees through general fund
  - Ridership grew from 2.95 million in 2009 to 4.66 million in 2019 (Figure 6.10)
  - 9 of 53 buses are diesel-hybrid electric and five total electric buses to be added by end of 2020
  - Named 2019 Outstanding Transit System for North America by APTA.
**Other Transit**
- Smart Way Express (2012) Blacksburg to/from Roanoke campuses;
- Campus Connect (2017) Blacksburg to/from Roanoke and Ballston/Arlington
- Coordinated services (Virginia Breeze intercity bus (Blacksburg to D.C), Amtrak to Roanoke

**Bicycling**
- 349 bike racks, 5,202 capacity (up from 3,924 in 2013), 11% are covered. 20 miles of shared-use paths on campus more than road network. 4,500 daily bikes on campus.
- Hokie Bike Hub (2013) free, assisted, bicycle repair/maintenance facility (3,000 users/yr)
- Five bicycle Fix-IT Stations across campus (2013)
- Roam NRV Bike Share system (2018). 4,000 sign-ups, 11,000 trips, 28,000 miles. Plan to double fleet from 75 to 150 and replace with electric-assist bikes.

**Carpooling** (carpool park permits (988 sold in 2019)

**Van Pooling** (mixed results: 3 van pools in 2017, now only one)

**Teleworking/Alternative Work Schedules**
- Early 2020: 113 telework and 83 alternative work schedule agreements;
- During Covid-19 73% of faculty/staff (~8,000) teleworking demonstrated the viability

**University Motor Pool** (replacing older vehicles with more efficient newer vehicles)

**Transportation Plans** *(Parking and Transportation Master Plan; Beyond Boundaries 2047: The Campus Plan; Bicycle Parking Master Plan; and Electric Vehicle Master Plan).*

**Road Network** (roundabouts, Southgate Interchange)

Since 2009 the university has been recognized as one of the **Best Workplaces for Commuters**, receiving the “Best of the Best” in the university category in 2014. The university has also been recognized as a **Bicycle Friendly University** (BFU) from the League of American Bicyclists since 2012. From 2012-2018, the university was a bronze-level BFU, and in 2019 the university moved up to the silver level.
6.2.9

VTCAC #10 Virginia Tech will engage students, faculty, and staff through education and involvement to develop and implement innovative strategies for efficient and sustainable use of energy, water, and materials in all university-owned facilities.

a. Engagement by the Office of Sustainability

Engaging Virginia Tech’s in implementing the 2009/2013 VT CAC has fallen mostly on the Office of Sustainability, which tracks and reports progress, operates student and community involvement, and nominates the university for various sustainability awards and recognitions.

Sustainability Tracking and Reporting

- **Sustainability Annual Reports** - In compliance with the 2009 Commitment approved through governance, the Office has prepared and disseminated these reports annually since 2010 to show the university’s progress in meeting climate and sustainability goals. The key sustainability metrics these reports cover include: greenhouse gas (GHG) emissions, energy use intensity, alternative transportation use, recycling, and water consumption.

- **Sustainability Tracking, Assessment & Rating System (STARS) reporting** - The Office of Sustainability prepares evaluations following the STARS framework, which is the prominent national tracking systems of the Association for the Advancement of Sustainability in Higher Education’s (AASHE). The tracking system considers five core areas when measuring a university’s sustainability standing: Education & Research, Operations, Planning Administration & Engagement, Innovation, and Supplemental Data. It is noteworthy that VT has performed well according to this metric--achieving a ‘gold rating’--but does have room for improvement in the ‘engagement’ category; VT’s ‘campus engagement’ score is quite high (20/21) but ‘public engagement’ is rated at only 14.89/20. The weakest sub-categories in this area are ‘continuing education’ and ‘community service’.

Student & Community Engagement

- **Sustainability Internship Program** - One of the Office of Sustainability’s key tasks is to oversee a campus wide student sustainability internship program. The Office is committed to providing valuable experiences that foster rapid personal and professional growth. The student projects are paired with Career and Professional Development curriculum and other training, and allow students to sharpen and expand their environmental professional skill sets. For the past several years this office has had 20 student interns from all colleges with many disciplines.

  Each intern cohort is broken into teams of 5 members based on topic areas of interest, such as energy, water, waste, and food. Each team has 5 members; one student serves as team leader and another as a communications representative. The team leader is responsible for facilitating meetings, tracking success of projects, and reporting progress to the team advisor (an Office of Sustainability employee). The communications representative is responsible for social media management, graphic design, photography, and content creation.

  Intern teams work on a variety of tasks, including:

  - **Partner Projects**: Teams partner with departments such as Energy Management, Stormwater Management, Sustainable Dining, and Housing & Residence Life to complete technical projects.

  - **Education & Outreach**: Teams plan and execute outreach events in partnership with community organizations such as the YMCA, Town of Blacksburg, and Blacksburg Farmers Market. Past events have included Thrift Swaps, a Pop-up Farmers Market, and seed plantings.
- **University-Wide Campaigns**: Teams assist in executing large-scale campaigns, including Earth Week and Sustainability Week.

- **Green Request for Proposals (RFP) Program**. Recognizing that good ideas often come from the community and that “student engagement is the driving force for advancing sustainability at Virginia Tech”, students are invited to develop proposals in response to the annual *Request for Proposal for Sustainability Initiatives from Student Organizations Program* (a.k.a. the Green RFP Program). Proposals submitted are evaluated based on their projected environmental benefits, feasibility, and cost considerations (including return-on-investment). Launched in academic Year 2010-2011, the university has sponsored this program for ten consecutive years. To date, 83 student proposals have been approved with funding exceeding $1.2 million, and estimated saving approaching $1 million and growing.

  The Green RFP was established as an alternative to a proposed ‘student green fee’ to solicit proposals from recognized student organizations that support the goals of the Virginia Tech 2009 CAC&SP. The Office of Sustainability manages and coordinates the program soliciting and reviewing of all proposals. The university established a fast track formal review and approval process with the goal of having the results announced and implementation initiated in the same academic year. VT’s formal Energy and Sustainability Committee reviews and prioritizes select proposals, the Office of Budget and Financial Planning identifies potential funding sources, and the Senior Vice President and Chief Business Officer approves and funds the projects.

  Virginia Tech was awarded the 2019 APPA – Leadership in Educational Facilities Sustainability Innovation Award for the Green RFP program.

- **Green Workplaces**. While most Office of Sustainability initiatives have focused on students, the **Green Office Certification Program** is targeted at helping faculty and staff (and graduate students) to make their offices more sustainable. Offices interested in participating are asked to identify a ‘Green Representative’ that completes a training program in order to most effectively support and coordinate implementation. Participating offices are scored based on six criteria: Recycling & Events, Energy, Purchasing, Waste Reduction, Transportation, and Innovation.

**Other Events and Initiatives**

- **Sustainability Week** is a flagship series of events held in Blacksburg that engages the whole Virginia Tech campus and the wider community each fall. Sustainability Week was first established in 2006, and now represents a lasting partnership between the VT Office of Sustainability, the Town of Blacksburg, and Sustainable Blacksburg, a citizen-led organization, along with many other community and student groups.

  Another key annual series of sustainability-themed events take place each **Earth Week**. While largely student-organized, the Office of Sustainability plays an important supporting role.

  The Office of Sustainability **Game Day Green Team** promotes recycling during tailgates. Students collect bottles and cans, distribute recycling bags, and work to build awareness around sustainability, recycling, and waste reduction. The Office has 80–100 different student volunteers per year, potentially reaching hundreds of VT football fans before games.

  The **Green Graduates of Virginia Tech** program asks graduating students to take a pledge that they will address environmental impacts and strive to make sustainable choices as they move on to their future careers and wider lives. Pledgers receive a free green cord to wear at graduation.
Student groups lead the charge for climate action and sustainability

The Sustainability Office is prolific in supporting a wide variety of initiatives on campus that promote sustainability. However, other organizations - and in particular student groups - also play key roles in advocating, promoting, and implementing changes to advance sustainability on campus and beyond.

Environmental stewardship has been part of Virginia Tech’s mission for decades, and ensuring that environmental justice is part of these efforts has long been a priority for its students. As early as the late 1960s, student- and community activists’ fought against pollution from the Radford Army Ammunition Plant. In 2008, it was students in the Environmental Coalition who met with President Charles Steger and convinced him to have the university develop its own Climate Action Commitment, which it did in 2009.

In recent years, Virginia Tech student groups have renewed their focus on local environmental issues, with a particular focus on climate justice. The Environmental Coalition participated in the student fight against the Mountain Valley Pipeline (MVP), a 303 mile natural gas pipeline currently under construction just miles from Virginia Tech’s campus. In 2016, the club took a road trip along the proposed route to speak with impacted residents and to see the land, water, and forests that are threatened by the project. MVP opposition is also fueled by effects of local residents and an understanding of the climate effects of the project operating for a 50-year period as proposed. In 2017 and 2018 the Environmental Coalition campaigned on campus against the MVP through tabling, flyering, information sessions, and fundraising for resistance efforts.

In August 2019, a group of students, faculty, and Blacksburg community members met to plan a strike for climate action at Virginia Tech. The mobilization was held in solidarity with the September 20th International Day of Climate Action organized by the Youth Climate Strike Coalition. Blacksburg’s strike drew near a thousand people, including Virginia Tech students, faculty and staff, high school students, and community members, who gathered for a rally and march for climate action. Organizers wrote and delivered six demands for climate action to Virginia Tech’s President Tim Sands. Following the march, student leaders spoke with Provost Cyril Clark regarding next steps. The student organizers formed Virginia Tech for Climate Justice (VT4CJ), a coalition of Virginia Tech students, faculty, staff, and Blacksburg community members that further refined recommendations for climate action at Virginia Tech. President Sands met with VT4CJ representatives twice and agreed to convene a Climate Action Commitment working group to update the University’s Climate Action Commitment. The Climate Justice Subcommittee was the first subcommittee of the Climate Action Commitment Working Group to be formed, and its membership is composed of many of the original members of VT4CJ.

Sustainability Academic Offerings

Virginia Tech’s STARS report earned the University 89% of possible points in academics. 71 VT departments (90%) offer 525 sustainability courses and an additional 341 courses that include sustainability in class topics. Over 22 percent of VT faculty are engaged in sustainability research. 83 percent of students adopt at least one sustainability learning outcome prior to graduation and
new student orientation continues to be a focus of the Office of Sustainability. Every July, the Office of Sustainability staff help train orientation leaders to equip them with the most accurate information on sustainability programs and offerings. The Office of Sustainability also sets up an informational table at “Gobblerfest,” the premier festival to introduce students to community, clubs, and other organizations on campus in the fall.

Most colleges have academic and research programs related to sustainability and climate action, including the colleges of Engineering, Natural Resources & Environment, Architecture & Urban Studies, Agriculture & Life Sciences, Sciences, and Liberal Arts & Human Sciences.

6.2.11

**VTCAC #14** Virginia Tech will work to provide funding to support sustainability programs. With regard to all the items in this resolution, major personnel and investment decisions, including capital projects, associated with implementing the VTCAC&SP will be based on a joint review of costs and benefits by university financial and facilities staff and be subject to availability of funds.

The last item of the 2009/2013 VT CAC dealt with was money. The committee spent considerable time word-smithing this item and it ended with the paltry statement that the university would “work to” provide funding…”based on a joint review of costs and benefits” and “subject to availability of funds.” It cited no specific funding and provided conditions that could be interpreted as no commitment at all. Despite this, the university came through with adequate funding for CAC-related programs.

Investments led not only to a reduction of emissions at a rate exceeding the 2009 CAC target trajectory, but also to a positive financial return due to reduced energy costs. Many of the investments were part of “the cost of doing business,” i.e. necessary maintenance and modern upgrades of energy systems, building design, and campus life infrastructure to keep the campus operating. Most of these investments incorporated the 2009 CAC goals with a modest increase in cost, such as shifting from coal to natural gas in the steam plant and building LEED certified buildings. Investment in student-initiated projects has led to energy cost and GHG savings while providing students with a voice in campus sustainability.

Some details:

- The last decade was one of considerable growth on campus as building square footage and enrollment each increased by about 22% from 2006 to 2019, but **GHG emissions actually decreased 24%**. This resulted from university investments in energy efficiency in new and existing building, fuel switching, waste recycling, and other sustainability measures.
- VT has **36 LEED certified buildings** now totaling about 30% of campus space, most built to Silver standard based on the 2009/2013 VTCAC.
- The **Five Year Energy Management Plan** (2015-2020) invested $14.2 million and achieved $2.7 million/year in energy savings for an average 5.3-year payback or 19% return on investment.
- The university invested in **steam plant upgrades** including a dedicated natural gas pipeline and new natural gas boilers that led to shifting from 97% coal in 2009 to 93% natural gas in 2019-20 and resulting drop in GHG emissions.
- The university is investing in **chiller upgrades** that will reduce chiller energy use by 20% when commissioned in 2023.
- The **Green RfP program** funds student-proposed sustainability projects. From 2010-2019, the university has provided more than $1 million to support these projects, giving students an important voice in sustainability and climate action.
• Funding for **numerous initiatives** in alternative mobility, waste recycling, campus grounds and woodlands, and agricultural practices have enhanced the quality and sustainability of campus life.

• **University plans** build on this experience with a sustainable vision for the future, including the *Beyond Boundaries 2047: the Campus Plan*, and master plans for parking and transportation, bicycle parking, and electric vehicles.

**6.2.12 Other Progress: Virginia Tech Electric Service**

One of the university’s most valuable energy resources is its electric utility, Virginia Tech Electric Service (VTES). VTES is unique: it is the only “municipal” electric power system owned by a research university, serving campus as well as retail customers in Town. VTES has been an integral part of the university since the 1890s, and its recently appointed director envisions the utility playing an instrumental role in the implementation of the 2020 VT Climate Action Commitment.

**6.3 Structure, Partnerships, and Arrangements to address Sustainability**

**6.3.1 Structure and Arrangements**

The 14 VTCAC points remain University policy today. The intent was for implementation to be shared throughout the university but, with the exception of elements #10 (engagement of all students, faculty, staff) and #12 (sustainability related academic instruction, research, and outreach), implementation has rested largely on Facilities dealing with energy, buildings, transportation, waste management, and monitoring greenhouse gas (GHG) emissions.

The **Office of Sustainability** in Facilities, as called out in CAC element #5, plays a key role in implementing the CAC&SP, coordinating campus sustainability, monitoring and reporting annual energy and GHG emissions, and partnering with sustainability related programs on campus and in the community. (See section 6.2.3 above).

Other units in Facilities (now **Division of Campus Planning, Infrastructure, and Facilities** (DCPIF)) are critical to success of the CAC, including

• **Virginia Tech Electric Service** provides electricity to campus and 6000 customers in Blacksburg;

• **Utilities** operates the steam plant, chillers, and distribution systems;

• **Energy Manager’s Office** monitors energy and GHG emissions and plans and oversees energy efficiency projects;

• **University Planning** develops campus transportation, landscape, space, and master plans.

• **Capital Construction** oversees design and construction of campus buildings;

• **Buildings and Grounds** maintains buildings, grounds, and manages waste and recycling; and

• **Real Estate** manages leased properties

Beyond Facilities, several other departments are critically important to the implementation of the Climate Action Commitment, especially with its goals of engaging the entire university including student life and academics.

• **Administration**: President, Executive Vice President & Provost, Senior Vice President & Chief Business Officer (CBO)

• **Academics**: Provost’s office, College Deans, Academic Departments, faculty, students

• **Operations**: Budget & Finance, DCPIF

• **Student Affairs**: Housing & Residence Life. Dining Services, Student Engagement

• **Auxiliaries**: Residence, Dining, Athletics
• **University Governance:** Board of Visitors, University Council, Committees, Commissions, Student Government, Faculty Senate, Staff Senate
• **Student Organizations**

6.3.2 Partnerships

It is difficult to list all of the critical partners that have contributed to the university’s implementation of the 2009 CAC, and who will also be key participants as we move forward.

• **Virginia Tech Foundation**
• **Town of Blacksburg:** Town Council, Town Administration, Blacksburg Transit, Sustainability Office, Housing and Community Development
• **Energy service utilities:** AEP/APCO, ATMOS
• **Regional Authorities** for Waste, Water, Sewerage: MRSWA, BVPISA, BCVPIWA
7. Critique of Virginia Tech Progress in Climate Action

Although the 2009/2013 VT CAC was a leading effort for its time, from the perspective of 2020, it is limited in both scope and ambition. It does not include several sources of campus GHG. It does not even mention renewable energy. Its overall goal of 80% reduction of GHG from 1990 levels by 2050, while a typical goal for its time, is not aggressive enough compared to the current need for climate action and the national movement of our peer institutions. There is much more we can do improving energy, buildings, waste management, transportation, and campus behavior and engagement. This chapter summarizes the limitations of the 2009/2013 CAC and areas where we could improve substantially.

7.1 GHG Scope of 2009/2013 CAC

The 2009/2013 VT CAC was limited in both its GHG footprint and in its vision for necessary GHG emission reduction. The footprint scope did not include agriculture operations, business travel, or leased building space. The vision aimed to reduce GHG by 80% from 1990 by 2050, still would leaving us with substantial GHG emissions in 2050. Our 2020 VT CAC aims to correct these limitations by adding previously omitted operations in the GHG footprint and becoming carbon neutral by 2030.

7.2 Renewables: 2009 VT CAC did not even mention Renewable Energy

An indication of how the world of energy has changed in a decade, renewable electricity is a centerpiece of the 2020 VT Climate Action Commitment, while the 2009 VT CAC did not mention renewable energy at all. The closest mention of renewables was in CAC point 4:

   “Virginia Tech will work toward these emission reduction targets through improved energy efficiency, reduction of energy waste, replacement of high-carbon fuels, and other measures identified in the VTCAC&SP”

7.3 Energy

Virginia Tech has made considerable progress in managing its energy systems and reducing GHG emissions by 24% from 2006 while the campus has grown by 22%. Most of this progress was achieved by converting from coal to natural gas in the steam plant; the steam plant fuel was 97% coal in 2009-10 and down to 7% in 2019-20. There is still some GHG reduction to be had as we move completely to natural gas by 2025, but this source of reduction is now limited. We will be dependent on the fossil fuel natural gas for some time, and emissions from natural gas, including upstream methane leakage from gas operations and transport, will be difficult to reduce.

While our AASHE STARS sustainability score was very good (71.94/100) and earned a Gold rating, our points for Operations (43% of maximum points) and especially operations categories Air & Climate (23%) and Energy (21%), brought us down.
7.4 Buildings

The 2009/2013 VT CAC was instrumental in improving the quality and efficiency of new building construction on campus, and in influencing the successful energy efficiency improvements of existing E&G buildings through the 5-year energy plan. However, in two building categories these efforts were less successful:

- **Existing auxiliary buildings** were not part of the 5-year energy retrofit plan and as a result, as Figure 6.8 well demonstrates, electricity efficiency in these buildings lags behind academic buildings that were part of the plan. These buildings make up 45% of academic + auxiliary square footage. The reason auxiliaries were not included was that academic funds were used to finance the retrofit plan and thus were applied to E&G buildings only. A means of financing auxiliary building retrofit is needed.

- The 2009/2013 VT CAC did not include **leased space off campus** used by university department operations. Most of these buildings, amounting 1.45 million ft² or 13% of total square footage, are included in the 2020 VT CAC GHG footprint. To reduce emissions from these buildings is a challenge since Virginia Tech does not own them. However, the VT Foundation owns 70% of the space, and they can play a role in improving energy efficiency and reducing emissions.

7.5 Agriculture, Forestry, Land Use

Agricultural and forestry operations GHG emissions were not included in 2009/2013 CAC and this was a critical omission. However, these operations are included in the 2020 VT Climate Action Commitment and GHG inventory. To understand the potential significance of this addition, the subcommittee provided a detailed analysis of emissions from agricultural operations as well as sequestered CO₂ from agriculture conservation tillage and Virginia Tech forested lands in the region.

Total net A/F/LU GHG emissions in 2019 are 8,046 MT CO₂e or about **3.3% of 2019 VT GHG emissions**.

7.6 Waste/Recycling/Composting

- **We will likely fail to meet VT CAC 2020 recycling rate goal.** The original 2009 VT CAC included a goal of 50% by 2025 and in the 2013 revision of the CAC the date was moved up to 2020 since in 2012 we were already at 44%. However, in subsequent years the recycle rate went down and has averaged about 40% from 2013 to 2019.

- **Waste Management Program is functional, but fragmented.** There are notable opportunities for improvement of waste management. The current organization is fragmented with multiple units having only a portion of the overall responsibilities. We need to conduct a comprehensive zero-waste audit in order to streamline operations to enhance efficiencies, reduce costs, and meet existing and future waste management needs.

- **No local composting facility.** Our food waste composting operation is limited in that there is only one state permitted facility within 100 miles of campus. Food waste composting must be expanded to include the Athletic Department. We need to develop a university composting facility near campus that can process campus food waste, other campus organic waste, and agricultural animal waste.
7.7 Transportation

While there was progress developing commuting options other than single occupancy vehicles (SOVs), there are other areas that have lagged behind. Most notably, SOV commuting increased by 10% from 2014 to 2018, there is an oversupply of parking, parking permit prices are cheap and provide no incentive for alternative commuting, VT is one of only a few universities that allow freshman to bring cars to campus, motor pool vehicles do not use alternative fuels, and business air travel was not included as a source of GHG in 2009 CAC.

- VT lacks policies and programs to incentivize more shifts to non-SOV modes.
- **2009 VT CAC point 11 is incomplete.** The 2009 CAC point pertaining to transportation is not time bound, makes it difficult to measure success.
- **Oversupply of parking** (2000 spaces sit empty on any given day)
- **Parking permit prices** are too low to discourage driving to campus. Getting people out of their SOVs and into other modes is largely about incentives and disincentives.
- **On-campus freshmen are allowed to bring their cars to campus.** Nearly all universities in Virginia prohibit on-campus freshmen from bringing cars to campus. This forces students to explore other transportation options available to them.
- **Student orientation and employee onboarding processes include little education on transportation options.**
- **University motor pool vehicles do not use alternative fuels.** Several years ago there were a few hybrid vehicles in the motor pool, but they have since been replaced with standard gasoline-powered ones. There is not a policy mandating the purchase of vehicles that utilize alternative fuels.
- **Behind on implementing parking demand management strategies.** The university has used some parking demand management strategies (i.e., metered parking in select lots, the Perry Street Area commuter/graduate permit, and preferred parking for carpoled and vanpools) but is behind other universities. Parking demand management reduces parking demand, preserves parking for certain trips, and promotes a shift away from SOV trips. It includes both parking pricing (raising parking fees) and supply-side (restricting parking supply) strategies.
- **Unmaintained shared-use paths and inconsistent bicycle lanes.** Across the over 19 miles of paved paths, many examples of poor path conditions (e.g., holes and cracks) result in low use of the network. As mentioned earlier in this report, only .1 miles of the 1.8 miles of bicycle lanes on campus meets the AASHTO standard of ≥4 feet wide.

7.8 Sustainable Choices

The idea of creating the Sustainable Choices subcommittee emerged later in the Working Group process from the recognition that many of the challenges discussed involve, at their core, behavior change. That is to say, they are about the various choices individuals make that enhance or inhibit progress in meeting our climate and other sustainability goals.

Subcommittee members started by making a short list of “problematic” or unsustainable behaviors evident within the Virginia Tech community based on the Greenhouse Gas Inventory data. Although there have been good efforts to make easier decisions about recycling and alternative transportation, this problematic list still included: unnecessary car commuting, improper disposal of waste, unsustainable food choices in dining halls, and low return rates of reusable to-go containers in dining halls.
The subcommittee recognized that behavioral choices are not just about individuals being educated and expected to make good decisions, but, perhaps more importantly, about how they are supported and nudged into making better or worse choices. Recognition of this approach led to exploring how structures could be changed to discourage unsustainable behavior, and more importantly, facilitate sustainable behavior. This served as the basis for CAC Goal 12.

### 7.9 Community Engagement and Climate Justice

Virginia Tech has made progress in engaging students through the Sustainability Internship and Green RfP programs, and student groups have done much to raise awareness on campus about climate and environmental issues. In addition, there are faculty who developed exceptional instruction and research programs related to climate action and sustainability, and many staff who have been engaged in efforts to reduce their departments’ environmental impacts.

However, these initiatives involve only a small proportion of the campus population, and they fall short of the level of involvement necessary to create a sustainability culture. The 2020 Climate Action Commitment envisions climate action and sustainability to become a more integral component of campus life, work, and culture. The CAC aims to achieve this by setting aggressive goals, elevating climate action to higher levels of university administration, integrating the exciting campus physical climate action projects into the university’s educational mission, and engaging more students, faculty, staff, alumni, and community members in the implementation of the CAC.
8. Comparison to Peer Universities

One of the Working Group’s deliverables is a comparison of Virginia Tech progress in climate action to peer universities. There are three good reasons for this:

1. To offer an evaluative reference point (To see how we are doing),
2. To adopt effective plans and avoid ineffective ones (To borrow and steal good ideas), and
3. To demonstrate that what we’re proposing is feasible and in line with similar universities (To show we are not crazy with our bold and aggressive climate action)

Knowing that our perspective is comprehensive and that other universities have different strengths in different areas, we decided to have our specialty subcommittees select the peer and exemplary universities to assess in their specialty area. Those areas include:

- Carbon neutrality and GHG inventory
- Renewable Energy
- Buildings
- Energy Systems
- Transportation
- Waste-Recycling-Composting
- Agriculture, Forestry, Land Use
- Climate Justice
- Community Engagement
- Budget and Finance

In most areas we selected 3-8 universities that we consider as peers or exemplars in that area. Some are from Virginia, some are Land Grants, some are from the ACC, some are far away, but all offer good examples and benchmark our progress to-date and our aspirations for our 2020 Climate Commitment.

Our peer review told us that, while our 2009 Climate Action Commitment was right for its time and has led to improved energy efficiency and reductions in GHG emissions, it now lags behind many of our peers. This deficiency is most notable in the quest for carbon neutrality, 100% renewable energy, zero waste, zero-net-energy buildings, robust alternative transportation, and community engagement to advance climate action and sustainable behavior.

Many of our related programs do standup well in comparison to others, but if Virginia Tech is to regain its leadership role in climate action and sustainability, we need to move to a new Climate Action Commitment that is right for this time.

We believe that we have found the right balance of aggressive, yet pragmatic climate action. Our goals are for carbon neutrality by 2030, 100% renewable electricity by 2030, investment in energy efficiency in existing and new buildings, carbon neutral agriculture, zero-waste campus by 2030, sustainable procurement, sustainable mobility, climate justice as a core value, ongoing community engagement avenues, and the Climate Action Living Laboratory to integrate these goals into the fabric of the university.

Relative to the peer and exemplary universities reviewed in this analysis, this 2020 VT Climate Action Commitment sets the stage for Virginia Tech to shine as an exemplar and leader in university climate action. Beyond our climate neutrality and zero-waste campus goals, six areas of the 2020 CAC stand Virginia Tech above the rest:

1. The detail and specificity of the pathways developed to achieve the CAC goals
2. Our own unique utility VTES leading our way to 100% renewable electricity, while most other universities are totally dependent on private utilities and companies
3. Using our considerable land resources not only to manage our agricultural climate impacts, but also to sequester carbon and develop renewable energy
4. Incorporating in our carbon neutral goal **scope 3 GHG emissions relating to behavior** (e.g., commuting, waste/recycling, business travel), while most others include just scope 1 & 2.

5. Integrating our physical climate action into the **university’s educational mission** through the Climate Action Living Laboratory (CALL).

6. Specifically addressing **community engagement, sustainable behaviors, and social equity and justice** as core elements of our climate action.

### 8.1 Carbon Neutrality and GHG Inventory

As part of this review, the GHG assessment scope and methods were compiled for the peer institutions listed in Table 1. This list includes state universities, research peer institutions, and a number of exemplary institutions from farther away.

<table>
<thead>
<tr>
<th>Peer Institutions</th>
<th>Second Nature Reporting</th>
<th>AASHE GHG Score (0 - 10)</th>
<th>GHG Software Platform</th>
<th>Carbon Neutrality Date / Emissions Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virginia Tech (VT)</td>
<td>No</td>
<td>2.02 (2017)</td>
<td>Internal Excel</td>
<td>80% reduction from 1990 by 2050</td>
</tr>
<tr>
<td>University of Virginia (UVA)</td>
<td>No</td>
<td>5.18 (2018)</td>
<td>SIMAP</td>
<td>2030</td>
</tr>
<tr>
<td>University of North Carolina (UNC)</td>
<td>Yes</td>
<td>3.58 (2017)</td>
<td>SIMAP</td>
<td>2030</td>
</tr>
<tr>
<td>College of William &amp; Mary</td>
<td>No</td>
<td>1.5 (2016)</td>
<td>UNH CCC*</td>
<td>2050</td>
</tr>
<tr>
<td>Virginia Commonwealth Univ. (VCU)</td>
<td>Yes</td>
<td>3.25 (2018)</td>
<td>UNH CCC*</td>
<td>2050</td>
</tr>
<tr>
<td>James Madison University (JMU)</td>
<td>No</td>
<td>3.4 (2018)</td>
<td>UNH CCC*</td>
<td>Through 2025, JMU will maintain annual adjusted net Scope 1, 2 GHG emissions less than 0.02 MTCO2e / gross square foot of energy use intensity-adjusted floor area</td>
</tr>
<tr>
<td>George Mason University (GMU)</td>
<td>Yes</td>
<td>5.07 (2017)</td>
<td>Clean Air Cool Planet</td>
<td>2040</td>
</tr>
<tr>
<td>Radford University (RU)</td>
<td>Yes</td>
<td>3.38 (2019)</td>
<td>SIMAP</td>
<td>2050</td>
</tr>
<tr>
<td>University of Maryland</td>
<td>Yes</td>
<td>7.16 (2019)</td>
<td>SIMAP</td>
<td>80% reduction from 1990 by 2050</td>
</tr>
<tr>
<td>University of Tennessee</td>
<td>Yes</td>
<td>8.11 (2018)</td>
<td>UNH CCC*</td>
<td>2050</td>
</tr>
<tr>
<td>Penn State University (PSU)</td>
<td>No</td>
<td>4.37 (2017)</td>
<td>Internal Excel</td>
<td>2061</td>
</tr>
<tr>
<td>Purdue University</td>
<td>No</td>
<td>complete (2013)</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>North Carolina State Univ. (NCSU)</td>
<td>Yes</td>
<td>4.87 (2016)</td>
<td>Clean Air Cool Planet</td>
<td>2050</td>
</tr>
<tr>
<td>Univ. of California Berkeley</td>
<td>Yes</td>
<td>6.52 (2018)</td>
<td>UNH CCC*</td>
<td>2035</td>
</tr>
<tr>
<td>Arizona State University (ASU)</td>
<td>Yes</td>
<td>6.04 (2017)</td>
<td>UNH CCC*</td>
<td>2025</td>
</tr>
</tbody>
</table>

*University of New Hampshire Campus Carbon Calculator (excel-base) was replaced by SIMAP (online) in January 2018.

There are many metrics that one could use for peer institution comparisons. However, these types of comparisons are difficult due to the individualized nature of universities with regard to characteristics like student enrollment, land area, age of buildings, urban or rural setting, research level, professional schools and hospitals, etc. In general, overall GHG emissions or even GHG emissions per student or building area are not particularly useful.

Table 8.1 shows the schools’ AASHE subscores for the GHG Assessment only. This gives a relative comparison of how well each school is doing for GHG Assessment based on the same third-party rating system. There are a number of requirements in this rating and it is compiled on a 10 point basis, where a higher score represents a more thorough GHG Assessment. Note that **VT is in the bottom third of the schools** based on this metric.

Table 8.1 also shows either the most recent Carbon Neutrality Date or Emission Goal. **VT is in the lower tier in this regard and its 2013 CAC goal is an 80% reduction goal rather than carbon neutrality.**

Schools vary widely in their reporting of Scope 1, 2, and 3 GHG emissions. It was difficult, in fact, to even find the GHG scope for some of these schools. It should be noted, however, that 2 schools
with very aggressive Carbon Neutrality Goals (ASU and UC Berkeley in 2025 and UVA in 2030) are limiting their initial carbon neutrality goals to Scope 1 and 2, though they are reporting some scope 3 goals in their GHG assessments. UC Berkeley aims to reduce Scope 1 & 2 emissions by 80% by 2025 and use carbon offsets for the remainder (see sections 8.3 and 8.4). This causes them to miss out on accounting for some common sense GHG emissions that we intend to include in our analysis.

Most of the schools in the table are including the scope 3 emissions of bus systems and airline travel in their GHG assessment. Only a few of these schools are including food emissions or leased spaced in their estimates. Most of the schools do include electricity Transmission & Distribution (T&D) losses, mainly because this is calculated automatically by formal GHG Assessment software. The only institution that mentions upstream methane leakage was the University of North Carolina at Chapel Hill. No details were provided and this was part of an emissions category of “Other,” which represented 6% of the total GHG emissions.

All of these scope 3 emissions have been under consideration for future VT GHG Assessments, and the Working Group recommends that that our carbon neutral by 2030 goal include scope 1, scope 2 (including leased buildings), and scope 3 emissions related to sustainable choice (commuting, bus system, business travel, waste/recycling, water/wastewater). Other scope 3 emissions including upstream natural gas methane leakage and emissions related to dining hall food are not included in carbon neutral by 2030 goal, but they will be estimated, monitored, and minimized.

Finally, 10 out of 13 schools in this table use either the Sustainability Indicator Management and Analysis Platform (SIMAP) or its predecessor, the University of New Hampshire Campus Carbon Calculator. The University of North Carolina specifically mentioned a change from an internal spreadsheet to SIMAP to analyze its GHG emissions in a more accurate and repeatable way.

### 8.2 Renewable Energy

Many universities have committed to 100% renewable electricity. Although not a complete list, Environment America gives 33 universities committed to 100% renewables including Florida State, Maryland, Wisconsin, Michigan State, among others. Our Virginia peers have made good progress in this area. UVA partnered with Dominion Power to build two solar farms in late 2018. Dominion built the solar farms and under the power purchase agreement (PPA) UVA is the sole owner of all produced power and renewable energy credits for 25 years. The College of William & Mary announced a similar project with Dominion in 2020. These schools are described below.

Table 8.2 presents a comparison of universities identified as Virginia Tech peers. Considering other universities with respect to renewable energy generation, we identify three exemplary schools in our region: the University of Virginia, William & Mary, and Penn State.

One common trend with all three of these schools is the use of Power Purchase Agreements (PPA). These agreements enable the schools to have little to no upfront costs, which makes them attractive options. The universities then pay for the power that comes from the renewables, in all three of our cases solar farms. The rates that the power costs vary, and some of the agreements can have complicated cost structures, but most indicate that the power coming from these agreements is likely cheaper than what they would normally pay from a utility.

It is important to understand that renewable energy projects benefit greatly from subsidies through tax credits and sales of RECs; since state universities cannot directly benefit from tax savings, they
Table 8.2: Peer and Exemplary Universities for Renewable Electricity

<table>
<thead>
<tr>
<th>School</th>
<th>VTES Equivalent</th>
<th>Steam/Power Plant</th>
<th>Energy Center</th>
<th>Renewable Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Virginia</td>
<td>Power and Light office in Utilities Department</td>
<td>Natural gas, coal &amp; oil produce 84% of UVA’s heat energy.</td>
<td>Renewable Energy Tracker and Energy Working Group</td>
<td>2 PPA’s with Dominion: 32 MW total, 21% of UVA’s electricity; solar substation; rooftop lease with Dominion</td>
</tr>
<tr>
<td>Penn State</td>
<td>Utility Services</td>
<td>2 Combined Heat &amp; Power (CHP) plants with a capacity of 13MW</td>
<td>EMS Energy Institute</td>
<td>70 MW solar farm PPA (25 years) with Lightsource BP; provides 25% of electricity</td>
</tr>
<tr>
<td>William &amp; Mary</td>
<td>None</td>
<td>Currently use natural gas and oil. New steam, hot &amp; chilled water plant under construction</td>
<td>Commonwealth Center for Energy and the Environment</td>
<td>PPA with Dominion for 20 MW solar farm that will produce ~50% of W&amp;M load; online in 2021; savings after 6 years</td>
</tr>
<tr>
<td>UNC Chapel Hill</td>
<td>Energy Services</td>
<td>Cogeneration facility, 50/50 coal &amp; natural gas</td>
<td>Institute for the Environment</td>
<td>20 kW solar roof, residence hall with solar heated water, 34 geothermal wells, plans for 0.5 MW solar</td>
</tr>
<tr>
<td>James Madison University</td>
<td>Partner with Harrisonburg Electric</td>
<td>East Campus Power Plant</td>
<td>Center for the Advancement of Sustainable Energy</td>
<td>10 kW solar project (2003); small wind training - 100 kW solar, 126 kW wind</td>
</tr>
<tr>
<td>University of Texas, Austin</td>
<td>Utilities &amp; Energy Management- Electrical Dist.</td>
<td>100% natural gas</td>
<td>Energy Institute</td>
<td>500 kW solar</td>
</tr>
<tr>
<td>Ohio State</td>
<td>Partner with Ohio State Energy Partners</td>
<td>CHP plant construction starting in May 2020</td>
<td>Center for Energy Res., Training, and Innovation</td>
<td>Purchase of RECs (18 MWhr in 2010)</td>
</tr>
<tr>
<td>Purdue</td>
<td>Energy and Utilities Office</td>
<td>Wade Utility Plant, 3 natural gas and 1 coal boiler</td>
<td>Energy Center</td>
<td>Duke leases from Purdue for 1.6 MW solar- electricity to &quot;Indiana Customers&quot;</td>
</tr>
<tr>
<td>NC State</td>
<td>Energy Systems Office</td>
<td>CHP plant with 2 gas turbines</td>
<td>Clean Energy Technology Center</td>
<td>Various small-scale projects</td>
</tr>
<tr>
<td>VCU</td>
<td>None</td>
<td>2 heating plants</td>
<td>Electric Power &amp; Energy Syst. Res. Lab</td>
<td>6.6 kW solar array on steam plant</td>
</tr>
<tr>
<td>University of Maryland</td>
<td>Engineering &amp; Energy Department</td>
<td>CHP (natural gas)</td>
<td>Energy Innovation Institution</td>
<td>5 solar arrays: 1 rooftop and 4 carports: total of 3.07 MW</td>
</tr>
<tr>
<td>University of Tennessee</td>
<td>Electrical Services</td>
<td>Steam plant; mixture of natural gas and diesel, 5 boilers</td>
<td></td>
<td>5 MW west Tennessee solar farm (owned and operated by the university)</td>
</tr>
<tr>
<td>Notre Dame</td>
<td>None</td>
<td></td>
<td>Center for Sustainable Energy</td>
<td>Geothermal; solar (150 kW array); hydroelectric (2.5 MW, 7% of load)</td>
</tr>
</tbody>
</table>

*bold = exemplary universities
can indirectly benefit from for-profit owners using the tax incentives, lowering the project cost, and therefore lowering the cost of electricity produced by the project. Here we can see why these PPAs are so attractive for universities, no upfront cost, often cheaper power, and greener power.

Penn St took a slightly different route in its PPA than UVA or W&M. Penn St’s PPA is with a renewable energy contractor, Lightsource BP, while UVA and W&M have their PPAs with a utility, Dominion Energy. Despite this difference the PPAs still function the same. Penn St’s contract with BP is for 70MW solar over 25 years. UVA’s for 32MW solar, and W&M’s for 20MW solar with Dominion. These solar agreements will provide about 25%, 21%, and 50% of this electricity at these universities, respectively. Although PPAs are important, they are not the only aspect that set exemplar universities apart from the rest.

William and Mary has plans to use their solar farms for educational outreach as well. Two demonstration solar projects are being planned on campus for educational purposes. W&M’s Director of Sustainability has said, “we want this to be a teaching and learning opportunity” about the solar projects. They are taking their renewable projects a step further and want to use them as a chance to educate the public and their students on the importance of environmental sustainability.

The University of Virginia and Penn State each have an energy center. UVA’s Energy Working Group leverages campus and community resources to promote energy conservation at UVA. Penn State’s Earth and Mineral Sciences Energy Institute aims to diversify campus energy sources and improve efficiency when generating and using energy. Having a body dedicated to working with the community to promote energy research and implement renewable energy on campus is what sets these schools apart from the rest.

8.3 Buildings

Among 25 Virginia Tech’s SCHEV-approved peer universities, most have some ongoing initiatives related to climate mitigation and sustainability that address energy efficiency of campus buildings. Majority of considered options are aligned with our 2020 CAC, for example:

University of California Berkeley’s 2009 Climate Action Plan called for reducing 80% of GHG emissions produced from campus buildings, primarily focusing on lighting, HVAC, and commissioning measures. In 2013, the university “pledged to become carbon neutral by 2025, becoming the first major university to accomplish this achievement.” Its 2025 Carbon Neutrality Planning Framework was produced in 2016 and upgrades its building efficiency through retrofit projects, behavior change, green building practices, and improved space utilization.

Cornell University’s 2015 Climate Action Plan is also striving to be carbon neutral, and is committed to campus zero carbon emissions by 2035 from their 2008 baseline. One of the key pathways to achieve this is adopting an Earth Source Heat geothermal system to heat the campus. Other efforts include building high-performance buildings to use less energy and do so more efficiently, improving energy conservation of existing buildings by updating building envelopes, adding automated control systems, improving lighting, and recovering heat.

In their 2015 Illinois Climate Action Plan (iCAP), University of Illinois at Urbana-Champaign commits to ensure that all new buildings and major renovations are net zero energy. On existing buildings, measures include reducing energy use when spaces are unoccupied and incentivizing behavioral changes that would encourage energy conservation, retro-commissioning, HVAC improvements, scheduling and control strategies, lighting improvements, and Energy Performance
Contracting (EPC). Their earlier 2010 iCAP also established a “no net increase in space” policy that applies to all buildings on campus including auxiliary and rented spaces. Such an approach would reduce GHG emissions that drive the peak energy demand for utilities. Among other energy savings options, iCAP lists centralized conservation efforts, development of campus fume hood efficiency program that would consider use schedules, disassemble unused and antiquated units, and convert system to variable-air-volume systems.

In February 2020, University of Pittsburgh announced their carbon neutrality commitment and committed to achieving a net zero carbon footprint by 2037. Under this plan, the university will improve building efficiency by pursuing 50% energy reduction of existing and 80% of new buildings.

Rutgers, the State University of New Jersey, developed a new Pathway toward a Carbon Neutral, Climate Resilient Rutgers in February 2020. Proposed initiatives include upgrades to building automation for real time monitoring and scheduling, various conservation efforts such as energy audits, retrofits, HVAC upgrades, envelope improvements, operations and maintenance improvements and training, time use shifts in class times and used spaces, and behavioral interventions such as training and education of users of spaces and labs.

As a part of their efforts, Gov. Cuomo announced in 2019 that State University of New York at Buffalo will add the first new $33.5 million, 257-bed zero-net, carbon-certified Residence Hall on campus.

The University of Virginia set a 2016-2025 Energy and Emissions Action Plan, and it has a staff of three engineering technicians and several controls technicians to develop and implement it. UVA’s Delta Force program has invested $15.5 million in energy projects and has saved $25.6 million and 180,000 metric tons of carbon dioxide emissions (MTCDE) since 2009.

The University of Maryland set a goal for efficiency upgrades in existing buildings that will reduce campus electricity use 20% by 2020, and it invested $21.5 million to save $1.7 million/year to reduce campus energy by 6%. UMD utilizes an Energy Dashboard and Solar Dashboard to display accessible data for the campus community.

As a part of the Climate Action strategies and projects, Penn State University implemented many Energy Conservation Measures such as improving steam traps, reprogramming thermostats and upgrading control systems in buildings, shutting down spaces that are not in use for extended periods of time, and installing room occupancy sensors. In addition, around 350 buildings on campus have Building Automation Systems that control the buildings’ climate and lighting based on the occupancy patterns.

According to their energy performance/Climate Action Plan, the University of North Carolina at Chapel Hill aims to minimize energy demand in their buildings by implementing various energy conservation measures such as improved standards for heating and cooling of campus buildings, optimized occupancy schedules, use of energy efficient equipment, behavioral changes among users of campus spaces, compliance of renovation and construction projects with the UNC Design and Construction Standards, NC State Building Codes and North Carolina General Statute 143-64, and overall better management of indoor spaces.

8.4 Energy Systems

As part of this review, we have researched and compiled the peer institutions listed in Table 8.3 below. This list includes exemplary institutions that have a diverse and resilient energy portfolio. Exemplar institutions are defined by their use of renewables and energy conservation. In our region, the
University of Virginia, Penn State University, and the University of Maryland stand out. In addition, University of California Berkeley and Stanford University are exemplars worthy of watching.

The following areas were analyzed during this research process:
- Key Climate Action Energy targets
- Implementation of renewables
- Designated energy management office

Exemplar universities were identified through their aggressive climate action goals and their plan to achieve those goals. The University of Virginia aims to be carbon neutral by 2030 and fossil fuel free by 2050. Penn State and the University of Maryland are committed to reducing GHG emissions through energy usage. Penn State aims to reduce GHG emissions by 35% by 2020 and UMD plans to reduce 60% by 2025. To achieve these targets each of these universities has a clear plan and completed projects. The University of Virginia and Penn State have incorporated Power Purchase Agreements into their climate action plans. Penn St’s PPA is with a renewable energy contractor, Lightsource BP, while UVA’s is with a utility, Dominion Energy. Penn St’s contract with BP is for 70MW solar over 25 years and UVA’s is for 32MW solar. These solar agreements will provide about 25% and 21% of electricity at these universities, respectively. These institutions have incorporated renewable energy throughout the campus, as well.

High visibility of solar projects is important to Virginia Tech’s success. UVA, Penn State and UMD provide examples of successful renewable energy projects. Penn State has developed a solar array on campus, which powers 100% of its electric fleet vehicles. This represents how one renewable energy project can impact multiple campus entities. UMD has 9,000 solar panels on their campus, which is effective and illustrates the university’s commitment to sustainability.

A designated energy management office is another key component of an exemplar institution. The University of Virginia and Penn State each have an energy center. UVA’s Energy Working Group leverages campus and community resources to promote energy conservation at UVA. Penn State’s Earth and Mineral Sciences Energy Institute aims to diversify campus energy sources and improve efficiency when generating and using energy. It is also important to note the tools used by the energy management office. The University of Maryland utilizes the Energy Dashboard and Solar Dashboard tools to manage its energy. Having a body dedicated to working with the community to promote energy research and implement renewable energy on campus is what sets these schools apart from the rest.

On the west coast, UC Berkeley and Stanford may offer useful lessons. UC Berkeley claims to be the first major university to pledge carbon neutrality by 2025. As mentioned in section 8.1, they include only GHG scope 1 & 2 emissions in this pledge and reduce emissions by 80% with the remainder addressed by carbon offsets; they aim to reduce scope 3 emissions to net zero by 2050. Among their interesting strategies is to rely on biogas to replace natural gas, which is their largest source of emissions mostly from their cogeneration steam plant owned by a third party. If they supplied 100% of natural gas with biogas they would achieve 91% of their 2025 goal.

Like Berkeley’s, Stanford’s cogeneration plant produced 90% of its GHG emissions. In 2012, after three years of study called the Stanford Energy Systems Innovations, it began construction on its new Central Energy Facility (CEF) which was completed in 2015. The CEF converted the central heating system from steam to hot water and incorporated heat recovery from the cooling system and both hot water and cold water thermal storage. Stanford also entered into a power purchase agreement with SunPower to build 78.5 MW of solar PV, 5.5 MW of which will be on the Stanford Campus. GHG emissions in 2017 dropped 68% from 2014 levels.
Table 8.3 Energy Opportunities Peer Universities

<table>
<thead>
<tr>
<th>School</th>
<th>Carbon neutral goals</th>
<th>Renewable Energy Goals</th>
<th>Plan to achieve renewable goals</th>
<th>Renewable projects completed</th>
<th>% RECs</th>
<th>Energy Management Office</th>
<th>Energy Management Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>UVA</td>
<td>1. Reduce greenhouse gas emissions 25% below 2009 levels by 2025. 2. As of CY 2015, a 7% reduction had been achieved. 3. UVA to be carbon neutral by 2050. 4. Fossil fuel free by 2050.</td>
<td>1. Increase the % of UVA’s energy derived from renewable sources (2020)</td>
<td>1. About 21% of UVA’s electricity comes from renewable sources.</td>
<td>1. Solar PPA, 25 Yr, 17 MW, with Dominion Energy (UVA Hollyfield Solar facility); 12% of electricity used at UVA. 2. Solar PPA...</td>
<td>Not buying RECs directly but through the PPAs</td>
<td>1. 2016-2025 Energy and Emissions Action Plan. 2. Three engineering technicians and several controls technicians.</td>
<td>1. UVA’s Delta Force program has invested $15.5 million in energy projects and has saved $25.6 million and 180,000 metric tons of carbon dioxide emissions (MTCD) since 2009.</td>
</tr>
</tbody>
</table>


UMD | 1. In 2017, 49% reduction in net carbon emissions compared to 2005. 2. Goal: 60% reduction in carbon emissions (from 2005 levels) by 2025. 3. The university is committed to achieving carbon neutrality for all scopes of emissions by 2050. | 1. 85% of UMD purchased power was renewable in 2017. 2. By 2020, all electricity delivered to campus by regional power plants will come from renewable sources. | 1. 9000 Solar Panels on Campus 2. Campus buildings and parking produce ~1.5 million kWh, 3 MW | N/A | Utilize Energy Dashboard and Solar Dashboard. | 1. Efficiency upgrades in existing buildings will reduce campus electricity use 20% by 2020. 2. Investing $21.5 million to save $1.7 million to reduce campus energy by 6% |

8.5 Transportation

Peer Comparison — Outside Virginia

Four universities identified as Platinum-Level Bicycle Friendly Universities by the League of American Bicyclists (considers factors related to engineering, education, enforcement, encouragement, evaluation and planning, and equity), and that had a Climate Action Plan adopted within the last 10 years, were chosen for comparison on pathways being recommended for VT by the Transportation Opportunities Subcommittee. One of these universities is urban (Portland State University (PSU)) while the other three (Colorado State University (CSU), Stanford University (Stanford), and University of California, Davis (UC Davis)) have more suburban campuses. Data for the table (see Table 8.4) was gleaned from the most recent Climate Action Plans and the university websites.
### Table 8.4: Comparison of Selected Recommended Pathways for Reducing Transportation-Related GHG Emissions Among Peer Universities*

<table>
<thead>
<tr>
<th>Metric from VT goals/pathways</th>
<th>VT</th>
<th>CSU</th>
<th>PSU</th>
<th>Stanford</th>
<th>UC Davis</th>
<th>UVA</th>
<th>JMU</th>
<th>W&amp;M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable transportation goal or strategy is part of most recent climate action plan</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>U</td>
<td>U</td>
</tr>
<tr>
<td>Freshmen prohibited from bringing cars to campus</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Cars restricted on campus roads</td>
<td>N</td>
<td>U</td>
<td>U</td>
<td>U</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Utilizes parking demand management</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Remote discount parking available</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Campus speed limit is 15 MPH or less</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Major non-vehicle pathways on campus</td>
<td>F</td>
<td>Y</td>
<td>U</td>
<td>U</td>
<td>Y</td>
<td>U</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Allows faculty/staff to telework</td>
<td>Y</td>
<td>F</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Carpool/vanpool incentives offered</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>High-efficiency motor pool vehicles available</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>U</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Air travel offset program in place</td>
<td>N</td>
<td>F</td>
<td>Y</td>
<td>Y</td>
<td>U</td>
<td>U</td>
<td>U</td>
<td>U</td>
</tr>
<tr>
<td>Public EV charging stations on campus</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

Y = Yes, N = No, U = Unknown, F = Future plans

Within their Climate Action Plan, three out of the four comparison universities included goals related to transportation (CSU, PSU, UC Davis). Of the three universities with transportation goals, the recommendations included increasing the fuel efficiency of campus motor pool vehicles (CSU, UC Davis), increasing reliance on teleworking and teleconferencing (CSU, PSU, UC Davis), offsetting air travel (CSU, PSU, UC Davis), improving data on commute modal split (PSU), improving carpooling (CSU, PSU), improving education on climate impact of travel (PSU), removing barriers in state system for choosing lower carbon forms of travel (PSU) as well as continuing/improving various programs such as free public transport, bike share programs, and bicycle parking/maintenance programs.

Data derived from their websites demonstrates that one university (UC Davis) restricts freshmen from registering a car on campus. One university (CSU) utilizes remote parking with a lower permit cost. Although all have some type of parking demand management, they varied in their specific options. For example, CSU and Stanford have parking options ranging from a daily charge...
to an annual permit. The former is a strategy that may reduce total days driven to campus. PSU provides prime parking spots for those who utilize carpooling. Even more unique, UC Davis offers “easy park personal parking meters” (placed on a car’s dashboard) that will charge for parking by the hour from a prepaid account. All four universities appear to have policies that allow teleworking but the use of these policies is unknown. UC Davis offers a “GoClub” membership that connects commuters with lower cost and stress commute options, transit subsidies, and 24 day parking passes. All peer universities have electric vehicle (EV) charging stations. It is free to park at CSU’s EV charging stations. PSU has four EV charging stations on campus that have an hourly charge and a four-hour maximum. Stanford has 80 EV charging stations.

Peer Comparison — Within Virginia

In Virginia, three universities were used in peer comparisons. University of Virginia (UVA), William and Mary (W&M) and James Madison University (JMU) were reviewed to compare transportation programs aimed at reducing GHGs through promoting alternative transportation. Virginia Tech and these three universities all have the following aspects: pre-paid transit through student fees, teleworking, carpool/vanpool incentives, and electric car charging stations. JMU was the only school that restricted regular vehicle traffic on core campus roads during heavy pedestrian periods. W&M was the only school that did not have bike share and remote discount parking. VT and UVA have some speed limits below 25 MPH, but W&M and JMU did not.

Virginia Tech does allow freshmen to have cars, which the other schools restricted. It is worth noting that of the nearly 10,000 on-campus residents, only 1,400 permits (14%) were purchased. It is unknown how many of those residents are freshmen. It was unclear or hard to find metrics for aspects such as: parking demand management, air travel offsets, quality/quantity of non-vehicle pathways, or fuel efficiency of campus motor pool vehicles. In general, VT compared well against these Virginia schools.

8.6 Waste-Recycling-Composting

Using the Sustainability Tracking, Assessment, and Rating System protocol, we compared Virginia Tech’s waste management program to that of eight land grant institutions, and six colleges and universities in the Commonwealth of Virginia (Table 8.5).

While we have made significant progress in the past two decades, clearly we have room for improvement. Institutions with very impressive waste management programs include North Carolina State University (NC State), The Ohio State University (OSU), Penn State University, and the University of Maryland (UMD). George Mason University (GMU) and the University of Virginia (UVA) have the leading in-state waste management programs. These universities offer a mix of urban and suburban campuses, providing a range of options for Virginia Tech to choose from to boost our waste management operations.

All of these universities have an updated climate action plan and STARS scores with the exception of NC State. The STARS scores of these universities provided rankings of waste management that were similar to Virginia Tech’s, with only George Mason surpassing the university. GMU has the Patriot Green Fund, which offers $100,000 for campus innovation in several sectors, including recycling services. In addition, all of these universities have zero waste plans for events. In particular, OSU has selected zero-waste buildings on its campus and has devoted its football games that it hosts as zero waste events. Campuses such as UMD have backed this effort.
Virginia Tech has a unique opportunity to exemplify its leadership in waste management by adopting these efforts and striving to be a zero waste campus. Furthermore, Virginia Tech is presented with an opportunity to emulate more innovative leaders in waste management such as OSU through the university’s pulping system to turn composted food waste into usable energy. Many of these universities, such as UVA and Penn State, have sustainability student internship programs that treat the university as a living laboratory, similar to Virginia Tech. VT has an opportunity to expand its programs.

Table 8.5 Peer Institution Waste Management Comparison - 4/16/2020

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Virginia Tech</td>
<td>Office of Sustainability</td>
<td>34,000</td>
<td>7,700</td>
<td>2017</td>
<td>5.29</td>
<td>1,488</td>
<td>416</td>
<td>3,867</td>
<td>5,771</td>
<td>33</td>
<td>2,285.84</td>
<td>590</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Penn State</td>
<td>Sustainability</td>
<td>46,000</td>
<td>17,000</td>
<td>2017</td>
<td>4.81</td>
<td>2,529</td>
<td>4,780</td>
<td>5,895</td>
<td>13,299</td>
<td>56</td>
<td>18,298.00</td>
<td>3,256</td>
<td>85</td>
<td>Old coiling lists are recycled, “Recycling Roadshow”, waste audits</td>
</tr>
<tr>
<td>Ohio State</td>
<td>Two offices: Energy Services and Sustainability and Office of Energy and Environment</td>
<td>68,000</td>
<td>27,000</td>
<td>2019</td>
<td>3.33</td>
<td>3,689</td>
<td>2,242</td>
<td>18,403</td>
<td>20,733</td>
<td>29</td>
<td>10,196.49</td>
<td>1,293</td>
<td>89</td>
<td>Zero waste facilities, zero waste football games, 20 tons of coffee compost</td>
</tr>
<tr>
<td>Auburn</td>
<td>Waste Reduction and Recycling Department</td>
<td>29,000</td>
<td>5,900</td>
<td>2019</td>
<td>4.42</td>
<td>845</td>
<td>0</td>
<td>4,408</td>
<td>5,263</td>
<td>16</td>
<td>31,580</td>
<td>2,505</td>
<td>93</td>
<td>GameDay Recycling Challenge, Recycling Villa</td>
</tr>
<tr>
<td>NC State</td>
<td>Program manager, operations manager, coordinator, operators, and interns</td>
<td>36,000</td>
<td>9,700</td>
<td>2015</td>
<td>4.15</td>
<td>2,537</td>
<td>1,475</td>
<td>4,282</td>
<td>8,294</td>
<td>48</td>
<td>1,970</td>
<td>1,066</td>
<td>65</td>
<td>Zero waste cment planning, zero waste guides, Recycling Mafia</td>
</tr>
<tr>
<td>Maryland</td>
<td>Office of Sustainability</td>
<td>39,000</td>
<td>10,000</td>
<td>2019</td>
<td>6.6</td>
<td>3,808</td>
<td>1,438</td>
<td>3,993</td>
<td>9,933</td>
<td>60</td>
<td>45,125</td>
<td>3,138</td>
<td>94</td>
<td>75% carbon neutral by 2025, zero waste office program, waste audits, meal plan exchange, house issue program</td>
</tr>
<tr>
<td>Clemson</td>
<td>Recycling services program</td>
<td>23,400</td>
<td>5,000</td>
<td>2018</td>
<td>5.52</td>
<td>802</td>
<td>442</td>
<td>2,969</td>
<td>4,255</td>
<td>30</td>
<td>146</td>
<td>57</td>
<td>72</td>
<td>Carbon neutral by 2025</td>
</tr>
<tr>
<td>Florida State</td>
<td>Sustainable Campus Office</td>
<td>36,000</td>
<td>6,700</td>
<td>2019</td>
<td>4.58</td>
<td>1,323</td>
<td>406</td>
<td>3,244</td>
<td>6,439</td>
<td>50</td>
<td>6,212</td>
<td>7,487</td>
<td>45</td>
<td>Move out collection bank</td>
</tr>
<tr>
<td>Tennessee</td>
<td>Office of Sustainability</td>
<td>28,300</td>
<td>24,500</td>
<td>2018</td>
<td>3.52</td>
<td>1,635</td>
<td>1,572</td>
<td>7,935</td>
<td>12,138</td>
<td>35</td>
<td>534</td>
<td>398</td>
<td>57</td>
<td>Zero Waste campus by 2025</td>
</tr>
<tr>
<td>UVA</td>
<td>Office of Sustainability</td>
<td>23,000</td>
<td>16,000</td>
<td>2018</td>
<td>4.3</td>
<td>6,157</td>
<td>747</td>
<td>4,895</td>
<td>11,812</td>
<td>59</td>
<td>371</td>
<td>41</td>
<td>90</td>
<td>zero waste guides for events, waste audits, meal plan exchange, house issue program</td>
</tr>
<tr>
<td>William &amp; Mary</td>
<td>Office of Sustainability – Even less faculty than VT</td>
<td>9,500</td>
<td>3,000</td>
<td>2016</td>
<td>3.89</td>
<td>386</td>
<td>174</td>
<td>1,258</td>
<td>1,959</td>
<td>36</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Very similar initiatives as VT with an intern program, ingenium, smaller scale</td>
</tr>
<tr>
<td>VCU</td>
<td>Office of Sustainability - organized through coordinators</td>
<td>32,000</td>
<td>12,000</td>
<td>2018</td>
<td>4.75</td>
<td>2,985</td>
<td>0</td>
<td>3,101</td>
<td>6,183</td>
<td>50</td>
<td>95</td>
<td>37</td>
<td>72</td>
<td>Generally a smaller operation, one thing we could be doing from them is a garden program</td>
</tr>
<tr>
<td>JMU</td>
<td>Office of Environmental Stewardship and Sustainability</td>
<td>24,000</td>
<td>4,000</td>
<td>2018</td>
<td>4.95</td>
<td>807</td>
<td>493</td>
<td>1,939</td>
<td>3,257</td>
<td>40</td>
<td>1,621</td>
<td>203</td>
<td>89</td>
<td>Focused more around sustainability in courses</td>
</tr>
<tr>
<td>GMU</td>
<td>Slightly larger office than VT - 5 full time and 5 intern groups</td>
<td>45,000</td>
<td>6,000</td>
<td>2017</td>
<td>7.32</td>
<td>698</td>
<td>0.50</td>
<td>2,128</td>
<td>2,857</td>
<td>60</td>
<td>3,432</td>
<td>361</td>
<td>90</td>
<td><a href="https://greenrules.edu/">https://greenrules.edu/</a></td>
</tr>
<tr>
<td>Radford</td>
<td>Office of Sustainability</td>
<td>11,000</td>
<td>2,000</td>
<td>2019</td>
<td>4.08</td>
<td>422</td>
<td>0.00</td>
<td>918</td>
<td>1,346</td>
<td>32</td>
<td>2,435</td>
<td>916</td>
<td>73</td>
<td></td>
</tr>
</tbody>
</table>
8.7 Agriculture, Forestry, Land Use

8.7.1 Agricultural Operations and Tree Cover Policies

Agricultural operations provide challenges for sustainability due to, for example, contributions of greenhouse gas emissions from animal agriculture. Accordingly, many peer institutions have omitted agricultural operations from their climate action plans. Offset strategies include reduced emissions, carbon storage, and the implementation of alternative energy strategies.

Most VT peer institutions have adopted management practices that reduce the production of methane from agricultural animals and carbon storage approaches. Several peer institutions use composting to reduce the impacts of food waste (Table 8.6), which is often co-composted or digested with animal waste (e.g., at Purdue and Ohio State). A noteworthy example is North Carolina State that just launched a compost facility using an aerated static pile composting system with capability to process 1,200 tons organic waste annually. Expected expansion will enable the university to meet its 70% waste diversion goal.

Increasing tree cover is another strategy to mitigate GHG emissions, with 20.9% of colleges and universities in the US currently achieving (8.7%) or developing (12.2%) campus tree cover goals (Table 8.6).

Table 8.6. Sustainable land use strategies of seven VT peer institutions which have adopted composting to manage wastes.

<table>
<thead>
<tr>
<th>University</th>
<th>Alternative Agriculture practices</th>
<th>Waste management</th>
<th>Tree Cover</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Washington</td>
<td>NA</td>
<td>Anerobic digestor</td>
<td>20.9% goal of 23%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Food waste &gt;3k tons</td>
<td></td>
</tr>
<tr>
<td>University of California, Davis</td>
<td>Active</td>
<td>Anerobic digestor</td>
<td>21% goal of 30%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Food waste &gt; 20k tons Off campus</td>
<td></td>
</tr>
<tr>
<td>Cornell University</td>
<td>Active</td>
<td>Windrow</td>
<td>Goal 25%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Food waste &gt;4k tons</td>
<td></td>
</tr>
<tr>
<td>University of Maryland</td>
<td>NA</td>
<td>Windrow</td>
<td>24% goal of 40%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Food waste 450-550 tons, Off campus partnership with local government</td>
<td></td>
</tr>
<tr>
<td>The Ohio State University</td>
<td>Active</td>
<td>Anerobic digestor</td>
<td>13% goal of 26%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>~2k tons via 3rd party</td>
<td></td>
</tr>
<tr>
<td>Purdue University</td>
<td>Active</td>
<td>Anerobic digestor</td>
<td>14.2% goal of 20%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Off campus, partnership with local government</td>
<td></td>
</tr>
<tr>
<td>North Carolina State University</td>
<td>NA</td>
<td>Aerated static pile composting system with capability to process 1,200 tons organic waste annually. Expected expansion will enable university to meet its 70% waste diversion goal.</td>
<td></td>
</tr>
</tbody>
</table>
8.7.2 Agrivoltaics: Co-use of farmland for solar arrays and agriculture

Exploring renewable energy sources leads most campus climate action plans. In this arena, agrivoltaics have arisen as a renewable energy source that is compatible with existing agricultural practices. Arizona State University is coupling the use of solar panels with vegetable production wherein the solar array reduces the negative impacts of high light and low moisture in the desert environment. Oregon State and Colorado State Universities are using agrivoltaics in forage and pasture settings, a strategy being considered by VT. Penn State is currently developing a 70 MW solar installation that incorporates agrivoltaics with pollinator species habitat for bee colony honey production and grazing sheep. Both crop and animal agriculture can co-exist under a properly designed solar array, resulting in little or no reduction in agricultural efficiency.

8.8 Sustainable Choices

As part of this review, we have researched and compiled for the peer institutions listed in Table 8.7 below. This list includes exemplary institutions that have committed to Climate Action and engaging their university community. Exemplar institutions are defined by their “top down” approach to climate action projects, strong engagement and cross-campus partnerships.

The following areas were analyzed during this research process:

- Key Climate Action Behavior targets
- Cross-campus collaboration partnerships
- Student engagement strategies
- Sustainability curriculum integration
- Examples of how the university is measuring its success

8.9 Climate Justice

Virginia Tech has the opportunity to become a leader among peer institutions by incorporating climate justice goals into its Climate Action Commitment. Currently, there are very few examples of peer institutions that have formally acknowledged the importance of climate justice, let alone organized their sustainability initiatives around it. Most climate justice efforts at universities have been initiated by students, and sometimes by faculty, but we were unable to find any institutions of higher education that have included climate justice in a university-wide climate commitment. As a result, our comparison to peer institutions focuses on student and faculty-led climate justice initiatives.

Students at the University of California-Berkeley initiated a Student Environmental Resource Center (SERC) that operates under the framework of environmental justice. Like the recent climate action commitment, SERC was founded as a result of student activists’ calls for the university to take issues of environmental injustice and climate change seriously. The students’ leadership is the primary reason SERC became an award-winning environmental justice organization within the first two years of its founding and continues to be a leader in tackling issues of environmental injustice. Another example is the Environmental and Climate Justice Studies Research Hub at the University of California-Santa Barbara, which works to “advance scholar-activism across the horizon of globalization, in defense of vulnerable human communities, fragile environments, and a just climate future.” Other top-tier universities with climate justice programs include University of Washington, University of Colorado, and University of Arizona.
<table>
<thead>
<tr>
<th>Peer University</th>
<th>Key Climate Action Behavior Targets</th>
<th>Cross-campus partnerships</th>
<th>Student engagement strategies</th>
<th>Sustainability curriculum integration</th>
<th>Examples of measuring success</th>
<th>Website links</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Maryland</td>
<td>Integrate sustainability into education, Use the university as a living laboratory</td>
<td>Energy Innovation Institute,</td>
<td>Sustainability Studies Minor, First year students must enroll in a sustainability class, Funds available for sustainable learning programs,</td>
<td>20 Sustainability Teaching Fellows, 200 Courses include sustainability</td>
<td>undergraduate and graduate students participate in a Sustainability Literacy Assessment every three years</td>
<td>University of Maryland Sustainable Goals, UC Berkeley Environmental Stewardship and Civic Engagement Committee, Student Engagement and Research Committee, Student Environmental Resource Center, Student Sustainability Ambassadors, Sustainability Showcase in the fall, Zero waste, Developing programs to track behavior change, Teaching &amp; Research Subcommittees, Sustainability Summer Internships, Sustainability Course Development Grants, “Smart Labs” program which measures sustainability in research labs,</td>
</tr>
</tbody>
</table>
There are also many models of **university-community partnerships** focusing on specific environmental or climate justice issues. Groups like Shield the People and UPROSE are community groups that center the people most affected by environmental injustices and who work with public institutions, like universities, to address these injustices. Furthermore, national groups like the Climate Justice Alliance work on applying specific strategies of environmental justice, such as “just transition” or “energy democracy,” alongside universities to provide economic relief in areas that have traditionally relied on fossil fuel industries. Additionally, **many environmental justice groups** have worked to connect the harms of climate change to the recent outbreak of COVID-19, which demonstrates how environmental justice is a broad approach that can positively inform almost all operations of a university—even those not immediately and obviously connected to the environment. This is to say that, despite the small number of comparisons available, there are successful models that can guide the way for incorporating environmental and climate justice into sustainability efforts and university planning.

Despite these examples of community-campus partnerships for environmental and climate justice, we have not found examples of other universities that have incorporated climate justice goals into their climate action plans. Thus, **Virginia Tech is poised to become a leader among peer institutions by establishing climate justice as one of the core values** of the Climate Action Commitment.

### 8.10 Community Engagement

As part of the Climate Action Commitment update process, we have researched and compiled information on peer and/or exemplary institutions to get a better sense of best practices. The institutions profiled have committed to Climate Action in ways that engage their respective university and wider communities. Additional information is available in the Community Engagement subcommittee report.

The following areas were analyzed during this research process:

- Key Climate Action Behavior targets
- Cross-campus collaboration partnerships
- Student engagement strategies
- Sustainability curriculum integration
- Examples of how the university is measuring its success

#### 8.10.1 The University of Virginia  [https://sustainability.virginia.edu/engage](https://sustainability.virginia.edu/engage)

The University of Virginia (UVA) communicates its work around sustainability and climate action via its webpage. A subpage focuses specifically on engagement activities. This subpage describes the various efforts the university takes to engage students, faculty & staff, alumni, and community partners. Relevant highlights from their work in engaging the community include:

1. **Establishment and prominent placement of clear engagement goals on their community engagement webpage**
   
   a. The University will educate and engage its students, faculty, staff, and the larger community; contribute to knowledge through research; promote health and well being; and foster public service related to these sustainability principles.
   
   b. Partner with the community to accelerate collaborative initiatives to advance sustainable, equitable, and healthy places for all.

2. **Development and support of student groups for sustainability**
a. **Sustainability advocates program** - A program to develop student leaders for sustainability by supporting sustainability projects that engage the UVA community.

b. **Sustainability student organizations** - Over 30 groups that include sustainability initiatives in their mission.

3. **Creation of cross campus committees engaging faculty, staff and students to develop and lead sustainability efforts**
   a. Environmental Stewardship Subcommittee
   b. Civic Engagement Subcommittee
   c. Teaching and Research Subcommittee

4. **Dispersing grants to faculty, staff, and students that engage the community in sustainability efforts**

5. **Partnerships with local sustainability and climate action efforts**
   a. **Climate Action Together** - City, county, and UVA effort to engage and inform the community around GHG reduction and the development of community wide climate action plans.
   b. **LEAP** - Local non-profit focused on energy efficiency and the expansion of solar energy within residential spaces. LEAP partners with the University by providing audits of campus housing and residential spaces.

6. **Previous year hosted 92 events to promote sustainability with over 5000 attendees.**

7. **Integration of three pillars of sustainability: equity, economy, and the environment into over 150 undergraduate courses**
   a. Key examples:
      ○ Within a green engineering course, students evaluated 500+ rooftops on campus for the potential placement of solar panels.
      ○ Students in a Solid Waste Management course contributed directly to the University’s Waste Action Plan.

8. **Development of academic programs, minors, and certificates:**
   - Global Studies - Environments & Sustainability | BA
   - Environmental Sciences | BA, BS, MA, MS, DMP, Ph.D.
   - Environmental Thought & Practice | BA, DMP
   - Civil & Environmental Engineering | BS, ME, MS, Ph.D.
   - Urban & Environmental Planning | BUEP, MUEP
   - Environmental & Land Use Law | JD
   - Innovation for Sustainability | MBA
   - Global Studies - Environments & Sustainability | Minor
   - Environmental Sciences | Minor
   - Technology & the Environment | Minor
   - Sustainable Business | Online Certificate

9. **Utilization and prioritization of the grounds as a living lab to allow students to directly implement engagement and stewardship efforts within the immediate environment.**

10. **Support of various research centers and groups across disciplines that focus on sustainability:**
    a. Creation of a teaching and research subcommittee within the Committee on Sustainability provides oversight for the disbursement of seed grants on a semester by semester basis.
    b. Highlighted research groups:
       ○ Alliance for Research on Corporate Sustainability
       ○ Biophilic Cities
       ○ Center for Design and Health
       ○ Convergent Behavioral Science Initiative
       ○ Environmental Humanities at UVA
       ○ Green Building & Public Health Innovation Partnership
11. Measurement and communication of success efforts
   a. Case studies are developed and shared to highlight successes and describe replicability and scalability of efforts.
   b. Sustainability reports on quarterly and annual basis

8.10.2 University of California Berkeley [https://sustainability.berkeley.edu/engage]

The University of California Berkeley campus has a dedicated webpage for climate action and sustainability efforts ([sustainability.berkeley.edu](https://sustainability.berkeley.edu)). Efforts to engage the various community stakeholders are described in a subpage focused on engagement. Relevant highlights regarding UC Berkeley’s approach to engaging the community in their climate action and sustainability efforts include:

1. Engagement in efforts to encourage behavioral change activities
   a. Cool campus challenges - A UC-wide competition to reduce carbon emissions across the system of campuses. Engaged 4215 participants or 7.5% of campus community. Reduced 2026 metric tons CO2 emissions according to self-reported actions.
   b. Real-time energy dashboards - These energy dashboards were installed in 137 buildings to help community members monitor energy and water usage. This allowed the community to easily visualize the savings in energy and water through behavioral change efforts.
   c. Development and strategic placement of tips and strategy guides - Booklets focused on energy saving strategies specifically for labs, offices, residence halls, and homes.

2. Easily accessible communication channels via social media and newsletter sign-up links
   ● Facebook, Instagram, Newsletter-sign up

3. Campus wide engagement to assess sustainability efforts in submission to the Sustainability, Tracking, Assessment, and Rating System (STARS).
   a. This effort culminated in the 11th highest rating of 349 universities with active STARS ratings. See engagement scores for UC Berkeley in Community Engagement SC report.

4. Extensive integration of sustainability into curricula
   a. The catalogue of courses includes over 600 offerings focused on environmental, social, and economic sustainability. This constitutes 18% of all campus courses.
   b. The cross-disciplinary nature of these courses is indicated by the fact that they represent over 45 different departments.

5. Development and promotion of degrees focused on sustainability
   ● 30 graduate programs, 25 undergraduate programs, 20 minors

6. Establishment of grant funds to support student and campus sustainability projects
   ● The Green Initiative Fund ([http://tgif.berkeley.edu/](http://tgif.berkeley.edu/)) provided $2.8 million in grants to 208 grant projects. 350 student internships were created through these grant projects.

7. Community education promoted through Green Campus Walking Tour
   ● This walking tour exists virtually on the dedicated webpage. There is also a printable map to engage in the highlighted destinations available on their dedicated webpage.([https://sustainability.berkeley.edu/engage/green-campus-walking-tour](https://sustainability.berkeley.edu/engage/green-campus-walking-tour))

8. Office of Sustainability certification for labs, departments, and events, recognizing their sustainability efforts:
9. Development of a Student Environmental Resource Center

- There are over 50 organizations and clubs focused on sustainability efforts.

8.10.3 University of Michigan [https://ocs.umich.edu/sustainability-goals/community-engagement/](https://ocs.umich.edu/sustainability-goals/community-engagement/)

University of Michigan’s Office of Campus Sustainability consolidates its sustainability efforts. The department has its own dedicated webpage at [https://ocs.umich.edu/](https://ocs.umich.edu/). Their efforts for community engagement are described on a focused subpage for community engagement at [https://ocs.umich.edu/sustainability-goals/community-engagement](https://ocs.umich.edu/sustainability-goals/community-engagement). Highlights of their community engagement efforts include:

1. **A well defined and visible goal on their community engagement focused webpage:**
   - Invest in programs to educate our community, track behavior, and report progress over time toward a campus-wide ethic of sustainability.

2. **Identification of sustainability cultural indicators to assess attainment of community engagement goal**
   - A cross-campus collaboration to measure community sustainability behaviors and attitudes.
   - Indicators include waste prevention behavior, conservation behavior, travel behavior, and awareness of sustainability initiatives.
   - Two annual surveys sent to the faculty & staff community and student community since 2015. More than 3500 students and 1500 F&S respondents annually.

3. **Establishment of the Planet Blue Ambassador program to enlist community members to support and participate in sustainability efforts**
   - 6500+ community members are designated as Planet Blue Ambassadors
   - Entry into the program requires an introductory training and then further commitments are individual selected and not required.
   - The program distributes a monthly newsletter
   - Ambassadors are also engaged via monthly meetings and book club discussions.

4. **Designated sustainable workplaces on campus**
   - Online assessment to request designation as a sustainable workplace: [Sustainable Office Assessment, Sustainable Lab Assessment](https://ocs.umich.edu/)
   - Over 380 sustainable workplaces on campus, involving 20,400 staff

5. **Annual community engagement event known as Earthfest** taken place for 25 years.

6. **Utilize campus as a living/learning laboratory to advance student led sustainability efforts**
   - Examples: Michigan Dining has partnered with 140 student sustainability projects annually; ENVIRON 391 course led to the creation of the Campus Farm.

7. **Establishment of a wide range of organizations and fellowships to encourage and support sustainability projects** ([http://sustainability.umich.edu/students](http://sustainability.umich.edu/students)).
   - **Planet Blue Student Leaders**: peer-to-peer sustainability behavior change
   - **U-M Sustainable Food Program**: student led program that supports sustainable food
   - **Student Sustainability Coalition**: manages the **Planet Blue Student Innovation Fund** which provides up to $50,000 annually to sustainability projects.
   - **Undergraduate Sustainability Scholars**: fosters sustainability leadership & engagement. Participants receive up to $3500 and training.
   - **Dow Sustainability Fellows**: graduate students engaged in solutions to sustainability concerns
   - **Sustainable Living Experience Theme Community**: dedicated living community
8. Orientation modules focused on the university's commitment to sustainability principles

8.10.4 University of Maryland [https://sustainability.umd.edu/progress/climate-action-plan](https://sustainability.umd.edu/progress/climate-action-plan)

As with other institutions, the University of Maryland has a dedicated Office of Sustainability with their own webpage at sustainability.umd.edu. There is not a dedicated webpage for their community engagement goals and efforts, but the respective efforts are acknowledged and described throughout the Office of Sustainability site. Highlights of their community engagement efforts include:

1. **Engagement goals focus primarily on education rather than community engagement**
   - Integrate sustainability broadly across the curriculum and student life so that all students demonstrate skills and knowledge related to the Sustainability Learning Outcomes.
   - Use the campus as a living laboratory by enhancing opportunities for students, faculty, and staff to work together to develop and implement solutions to campus sustainability challenges.
   - Adhere to strategies outlined in the Education for Sustainability Report.
   - One greater community engagement goal stated as: Expand sustainability knowledge and collaboration through demonstration and outreach projects, joint agreements, professional conferences, and participation in university-agency initiatives.

2. **Partnerships for Action Learning in Sustainability (PALS) established to integrate action learning within the local community focused on cross-discipline approaches to sustainability**
   - In 2017-2018, 23 PALS courses included 350 students in disciplines including Business, Architecture, Agriculture and Natural Resources, and Public Health

3. **Dedicated social media pages for sustainability efforts** Facebook, Instagram, Twitter, YouTube

4. **Dedicated majors, minors, and graduate programs that specifically address climate and sustainability issues**: 15 Undergraduate Majors, 13 Undergraduate Minors, 20 Graduate programs

5. **The university has 14 research centers with missions to find solutions to environmental issues**

6. **Establishment of a Sustainability Teaching Fellows program**
   - The program provides training and mentoring for faculty in their pursuits of integrating sustainability issues into their courses.
   - Since its inception, 210 professors participated leading to the revising of 217 courses to integrate sustainability topics across 71 disciplines.

7. **Support a Student based Lead, Educate, Act, Facilitate (LEAF) program**: In 2017-18, 14 students reached 3,229 students via 77 events promoting sustainability.

8. **Evaluative criteria to measure their education efforts around sustainability include:**
   - First year sustainability education (% of students engaged)
   - Sustainability studies minor students (# of students)
   - Sustainability teaching fellows participation (# of faculty)
   - LEAF outreach team impact (# of students reached)
   - Green housing program participants (# of students)

9. **Creation of a Green Office Certification program**
   - A tiered certification program for individual offices to achieve sustainable principles/practices.
   - Stated goals of the program:
     - Engage campus community in activities to strengthen position as a leader in sustainability, Recognize and reward leadership in sustainability; Educate participants about how and why to take action; Support the University’s [Climate Action Plan](https://sustainability.umd.edu/progress/climate-action-plan) and Strategic Plan; Further integrate sustainability into campus culture; Conserve water, save energy, minimize waste and save money; Promote campus policies that support sustainability
8.11 Budget and Finance for Climate Action

The 2020 VT Climate Action Commitment calls for investment in energy efficiency and climate action. Those investments are consistent with what many peer universities are doing. Let’s review some of the examples.

Renewable energy. Considering other universities with respect to renewable energy generation, we identify three exemplary schools in our region: the University of Virginia, William & Mary, and Penn State. One common trend with all three of these schools is the use of Power Purchase Agreements (PPA). These agreements enable the schools to have little to no upfront costs, which makes them attractive options. The universities then pay for the power that comes from the renewables, in all three of our cases solar farms.

Buildings. The University of Virginia set a 2016-2025 Energy and Emissions Action Plan, and it has a staff of three engineering technicians and several controls technicians to develop and implement it. UVA's Delta Force program has invested $15.5 million in energy projects and has saved $25.6 million and 180,000 metric tons of carbon dioxide emissions (MTCDE) since 2009. The University of Maryland set a goal for efficiency upgrades in existing buildings that will reduce campus electricity use 20% by 2020, and it invested $21.5 million to save $1.7 million/year to reduce campus energy by 6%.

Energy systems. A designated energy management office is a key component of an exemplar institution. The University of Virginia and Penn State each have an energy center.

Transportation. Parking demand management varies among peer universities. For example, CSU and Stanford have parking options ranging from a daily charge to an annual permit. The former is a strategy that may reduce total days driven to campus. UC Davis offers “easy park personal parking meters” (placed on a car’s dashboard) that will charge for parking by the hour from a prepaid account. All peer universities have electric vehicle (EV) charging stations. It is free to park at CSU’s EV charging stations. PSU has four EV charging stations on campus that have an hourly charge and a four-hour maximum. Stanford has 80 EV charging stations.

Waste-Recycling-Composting. GMU has the Patriot Green Fund, which offers $100,000 for campus innovation in several sectors, including recycling services. Several universities have composting facilities for their food and other organic wastes. North Carolina State that just launched a compost facility using an aerated static pile composting system with capability to process 1,200 tons organic waste annually. Expected expansion will enable the university to meet its 70% waste diversion goal.

Agriculture/Forestry/Land Use. Related to waste management, composting and/or waste digestion are used at seven peer universities evaluated.

Community Engagement and Sustainable Choices. The many examples reviewed in these areas indicate the innovative programs by our peer institutions, ranging from student initiatives, living laboratory programs, green lab upgrades and certification, green office certification, sustainable workplaces certification, community partnerships, student organizations, sustainable academic program development, and others, all supported financially by the university.
9. Conclusion and Proposed Immediate Actions

This chapter provides some concluding comments and identifies actions that can be taken in the short term (2020-2022) to get us going and demonstrate right away the university’s commitment to climate action.

9.1 Concluding Comments

In January 2020, with great hope and opportunity, the Working Group began its task of evaluating Virginia Tech’s current position and future role in addressing climate change. The stars seemed to align with growing promise for a new and bold Virginia Tech climate action commitment. Student Climate Strikes and activism raised awareness of the existential threat, faculty and staff senates and student government passed resolutions in support of the student demands, our Facilities staff showed remarkable interest, the university had available resources, our peers UVA and William & Mary were taking bold steps, the Virginia Governor and General Assembly were initiating major policy changes, and, in the words of President Sands, “Virginia Tech had a duty to respond.”

Six weeks later, as the Working Group completed its Interim Report in early March, the world dramatically changed. The Covid-19 pandemic closed the university campus and, at this writing in late June, continues to be a global crisis and poses great uncertainties for the university.

Still, the climate crisis has not gone away, and during this time we are learning important lessons. People are learning to trust science and use it to inform policy-making, shape responses, and guide action. This public health crisis has exposed uneven vulnerabilities in our economy and society, raising calls for recovery efforts to redress inequities. Similarly, our actions to combat climate change and strengthen our community’s resilience must be guided by an equitable transition to sustainable action. As a new world dawns, we must bounce “forward,” not “back,” to seize the hope and promise of this moment.

Our work focused on the smart ways the university can advance genuine climate action, even in this age of uncertainty. And through the multitude of working group, subcommittee, and community zoom meetings, our discussion has reflected on the opportunity for Virginia Tech to reinvent itself, not only in its commitment to climate action, but also in its responsiveness to the needs of the world around us.

Our recommended climate action commitment is bold, aggressive, and comprehensive. Its 15 goals and pathways to achieve them aim to engage the entire university.

- They include restructuring our operations and governance of climate action and sustainability through a new university-wide Climate Action and Sustainability Office, Chief Climate Action & Sustainability Officer, and governance Climate Action, Sustainability & Energy Committee.
- They require necessary upgrades to the campus physical plant and operations to reduce GHG emissions to achieve carbon neutrality by 2030, including steam plant and chiller energy systems, new building energy efficiency, efficiency retrofit of existing buildings, improved agricultural operations, sustainable mobility, and better management of waste and recycling.
- They include partnering and investing our way to 100% renewable electricity by 2030 through 15 MW (~100 acres) of solar PV capacity on Virginia Tech buildings and lands and...
130 MW (~650 acres) of solar PV farms developed by utility or 3rd-party firms with our own utility, Virginia Tech Electric Service (VTES), the power purchaser.

- They include integrating these improvements into the educational mission through a **Climate Action Living Laboratory**, which engages colleges, departments, faculty and students in experiential learning using the campus physical plant upgrades as a focus for instruction, research, and outreach.
- They include **engaging everyone in climate action** through better and more visible information on campus progress and enhanced involvement in CAC annual reviews and updates.
- They include creating a **culture of sustainability** by making sustainable choices by students, faculty, and staff easier and more desirable through social media campaigns and structural changes, including campus procurement policy.
- They include assuring that climate action considers not only financial, environmental, and reputational effects, but also the **social equity and justice** impacts and benefits of our goals and pathways.

In several areas, our VT 2020 CAC sets the stage for Virginia Tech to shine as an exemplar and leader in university climate action. Beyond our climate neutrality and zero-waste campus goals, **six areas of the 2020 CAC can place Virginia Tech above other universities:**

1. The detail and **specificity of the pathways** developed to achieve the CAC goals
2. Our own **unique utility** VTES leading our way to 100% renewable electricity, while most other universities are totally dependent on private utilities and companies
3. Using our considerable **land resources** not only to manage our agricultural impacts, but also to sequester carbon and develop renewable energy
4. Incorporating in our carbon neutral goal **scope 3 GHG emissions relating to behavior** (e.g., commuting, waste/recycling, water/wastewater, business travel), while most others include just scope 1 & 2
5. Integrating our physical climate action into the university’s educational mission through the Climate Action Living Laboratory (CALL).
6. Specifically addressing **community engagement, sustainable behaviors, and social equity and justice** as core elements of our climate action.

**9.2 Climate Action Project/Initiatives for Near Term (2020-2022)**

Although the 2020 VT Climate Action Commitment focuses on 2030 as the target date for most of its goals, the pathway to those goals begins the day the CAC is adopted, if not before. The Working Group has identified a number of initiatives and projects that can and should be acted on in the short term from now until 2022 to get a jump start on necessary action and to demonstrate the university’s commitment, with full understanding of the university’s current budget constraints and uncertainties.

These proposals are listed below sorted by (a) low-cost/no-cost/revenue-neutral initiatives, (b) ongoing and budgeted projects, and (c) new priorities in need of funding and/or approval.
9.2.1 Low/no cost/revenue neutral project/policy/planning initiatives

- **GHG Software Platform**
  Purchase an annual license to a formal GHG assessment software platform. SIMAP (Sustainability Indicator Management and Analysis Platform) is a carbon and nitrogen-accounting platform that can track, analyze, and improve your campus-wide sustainability. This platform is the most widely used method of analysis by Universities for their carbon and/or nitrogen footprints. It has customizable carbon emissions coefficients, flexibility in data import and export, and includes a third-party data review, which provides additional points in the AASHE STARS Rating System.

- **Reconstitute the Energy & Sustainability Committee (E&SC) in governance to the Climate Action, Sustainability, and Energy (CASE) Committee.**
  Broaden the mission of E&SC to provide governance oversight of CAC implementation; rename E&SC the Climate Action, Sustainability, and Energy (CASE); modify the charge, membership, and reporting lines, and establish new subcommittees including Climate Action Living Laboratory, Climate Justice, Climate Action Engagement, Sustainable Choices, among others.

- **Establish an alternative mobility subcommittee of the Transportation and Parking Committee**

- **Establish framework for Climate Action Living Laboratory (CALL) through Provost’s Office, College Deans, and Facilities Department**
  One of the most important goals of the 2020 VT CAC is integrating the goals and pathways into the educational mission of the university. Many of the CAC goal pathways focus on the opportunities for the Climate Action Living Laboratory (CALL) including renewables, energy systems, buildings, agriculture/forestry/land use, waste/recycling/composting, transportation, climate justice, sustainable choice, and community engagement. What is needed is a framework for designing, implementing, and operating the CALL to take full advantages of the opportunities.

- **Promote VTES-PEC partnership as part of Climate Action Living Laboratory**
  VTES and the Power and Energy Center (PEC) have collaborated and agreed on a partnership to use VTES as a testbed for research projects on what may become the VT Smart Grid. The **VT Smart Grid** can also be supported by VT solar development and VT battery storage as key components of the initiative currently being discussed with APCO.

- **Initiate partnership with APCO on renewables**
  The best opportunity for growing our renewable electricity base, especially before the power purchase contract expires in 2027, is to partner with APCO as they must grow their renewables in response to new state mandates. This mutually beneficial partnership should be initiated immediately.

- **Initiate community relations with VTES Town customers**
  Virginia Tech is closely tied to its Blacksburg community in many ways. One important way is through VTES, the electric utility for 6000 Blacksburg customers. As VTES moves toward 100% renewable electricity, it should engage its town customers, both to be part of the discussion of prospective changes and be part of the development through rooftop and community solar projects.
● Develop plan for resilience/redundancy in steam plant for full conversion to natural gas by 2025
Based on the new natural gas contract, develop a plan for steam plant backup fuel and boiler redundancy by 2025.

● Develop a Utility Master Plan
The 2020 CAC provides a set of goals and pathways that should be incorporated into a Utility Master Plan, which describes a long-term vision of Virginia Tech energy systems and identifies initiatives and projects.

● Adopt Campus Tree Policy
The proposed Tree Policy will ensure that a sustainable urban tree canopy is maintained on the Virginia Tech campus and will contribute to our national recognition as a Tree Campus USA. Projected results if a 25% urban tree canopy goal is achieved include: an increase in annual carbon sequestration to help offset University operations, and lower energy use, cleaner air, more pleasant summer air temperatures, and enhanced stormwater mitigation.

● Implement and Evaluate Sustainable Procurement Policy 2020-2022
Implement the April 2020 Sustainable Procurement Policy, which is based on the 2009/2013 CAC. Over two years, the Procurement Department in conjunction with the E&SC will evaluate the policy in light of the 2020 VT CAC https://www.procurement.vt.edu/. The Policy:

● Engage VT Foundation in energy management plan for buildings in Blacksburg leased to VT department operations
The Foundation operates on a revenue neutral basis, so that any investment it makes in energy efficiency improvements in its leased buildings must be recovered by increasing rent. With prudent efficiency investment, that increased rent for the university should be more that offset by a decrease in its utility bills. The Foundation CEO is willing to engage in energy retrofit under these terms on a pilot basis, starting with the Corporate Research Center when a new CRC president is hired.

● Identify candidates for Zero-Net-Energy building on campus and develop fundraising plan
If a signature marque ZNE building is to be completed on campus by 2026, project identification and fundraising need to commence in 2020-21.

● Seek external funding for agrivoltaics test array at Catawba Sustainability Center and/or Kentland Farm
Co-use solar and farmland agrivoltaics provides educational and research opportunities. The best sites for agrivoltaic projects are at Kentland Farm and Catawba Sustainability Center (CSC). Because siting studies and community engagement for a CSC solar project has already taken place in Catawba, the CSC is the best initial site for such a project.

● Student Project for Fishburn Forest Wind Energy Assessment
Although Blacksburg has limited wind resources, one prospect is Virginia Tech’s Fishburn Forest atop Price Mountain. This would make an excellent student project in conjunction with James Madison University’s wind resources program that leases necessary equipment and provides technical support.
9.2.2 Ongoing budgeted projects

- **Implement ongoing projects to improve steam plant and upgrade chiller system.** Steam plant upgrades including additional of boiler #12 will provide sufficient natural gas boiler capacity to eliminate coal boilers. Chiller upgrade project, when complete in 2023, will reduce cooling energy use by 20%.

- **Evaluate new natural gas contract on implications for CAC goals and pathways**
  The new natural gas contract was effective July 2020. It affects several factors related to the CAC goals and pathways for steam plant operation. The new contract has favorable terms for natural gas availability, price, prospects for renewable gas, and need for steam plant backup fuel and boiler redundancy.

- **2020 RECs for 30% Renewable Electricity**
  **Done.** Virginia Tech purchased RECs from Apco for $1/MWh for 20% of its electricity in 2020 to achieve 30% renewable electricity. The 2020 RECs purchase makes a serious statement about our climate commitment, and we achieve the Governor’s E.O.43 requirement to procure 30% of their electricity from renewable sources two years early for state agencies like VT (by 2022) and ten years early for utilities like VTES (by 2030).

- **Implement Building Design and Construction Standards in light of CAC Goals**
  The comprehensive Building and Construction Design Standards were adopted in May 2020 and provide an exceptional resource to streamline the design process. The standards incorporate compliance with the basic elements of the CAC.

- **Fill the VT Energy Manager Position and supplement staff as needed**
  This position has been vacant for more than one year and is critically important for implementing the entire Climate Action Commitment. The new energy manager should have sufficient staff.

- **Implement budgeted projects in Parking & Transportation Plan**
  Several projects are under various stages of development and should be developed, including the Multi-Modal Transit Facility, the Kent Street bicycle lane towards the Drillfield.

9.2.3 Priority projects requiring funding/approval

- **Create University-wide Climate Action and Sustainability Office (CASO) led by a Chief Climate Action and Sustainability Officer (CCASO).**
  Convert the current Office of Sustainability in Facilities to the university-wide CASO, which would be responsible for VT 2020 CAC implementation. The CCASO would report to the Senior Vice President and Chief Business Officer and the Executive Vice President and Provost.

- **Develop the University Compost Facility at Kentland**
  Developing and operating the University Compost Facility at Kentland will reduce net animal waste GHG emissions, support soil health, relieve the need to purchase new land for future land application of animal wastes, and support sustainable agriculture education and research. The Facility will also provide significant benefits in management of campus organic wastes from dining halls, athletics, the vet school, and campus tree trimmings. Capital cost is estimated at $1.4-1.8 million with net operating cost of about $165,000/year.
- **Initiate the 10-year Energy Management Plan**
  This plan to retrofit existing buildings and energy systems will have significant effects on reducing energy and GHG emissions while providing a financial return on investment of 10-15%. It’s a no-brainer. Let’s get on with it. The first step is to formulate projects for Year 1 of 2021-30 plan focusing on electricity efficiency to meet Governor’s goal of reducing agency electricity consumption by 10% from 2006 by 2022.

- **Develop solar projects on campus: 2.35 MW by 2022**
  Finalize plans for addition of solar projects on campus buildings and lands, evaluating options for university-owned and operated systems or 3rd party-owned and operated projects with VT power purchase agreements (PPA). Because of Covid-19 impacts on university financial resources, a preferred option may be PPAs that would preserve university capital for other needs including funding the 10-year energy management plan.

- **Contract Zero-Waste Consultant to conduct VT Waste Audit**
  We propose the university hire a zero-waste consultant to conduct a waste audit to objectively evaluate waste management organization, staffing, procedures, and equipment for administration and academic facilities, and auxiliary enterprises, and to identify opportunities to streamline operations, maximize efficiencies and reduce costs.

- **Implement Campus-wide Green Lab Program**
  Because of the energy and economic savings potential of the Green Lab improvements, Virginia Tech should officially develop a Green Lab program to ultimately achieve Green Lab certification for 80% of VT science and engineering labs.

- **Implement current transportation infrastructure plans**
  Construct green bicycle lanes in strategic areas where known safety problems exist, the green link from the Perry Street area to Burruss Hall, replacing the 16 remaining substandard bicycle racks, improving lighting and accessibility of existing trails, sidewalks, and crosswalks, install/improve bicycle lanes on Washington Street and Kent Street.

- **Require University fleet vehicle purchases to emphasize fuel efficiency** through zero-emission, hybrid, and electric vehicles.

- **Parking permit restructuring:**
  Prohibit on-campus freshmen from purchasing a parking permit. Increase the price of a faculty/staff parking permit and implement an income-based sliding scale for permit fees.
Appendix A: Working Group Subcommittee Reports Contents and Executive Summaries

- Agriculture, Forestry, Land Use GHG subcommittee
- Budget and Finance Subcommittee
- Buildings Opportunities Subcommittee
- Climate Justice Subcommittee
- Community Engagement Subcommittee
- Energy Opportunities Subcommittee
- Greenhouse Gas Inventory Subcommittee
- Peer Institutions Comparison Subcommittee
- Renewables Opportunities Subcommittee
- Structuring Sustainable Choices Subcommittee
- Transportation Opportunities Subcommittee
- Waste, Recycling, and Composting and Procurement Subcommittee

Full Subcommittee reports available in WG report Volume II
Virginia Tech 2020 Climate Action Commitment Working Group
Agriculture, Forestry, Land Use Subcommittee Report

Patrick Hilt, Jody Booze-Daniels, Greg Evanylo, John Randolph, John Seiler, Nick Copeland, David Haak, Jamie King, Nathan King, Adam Taylor, Tessa Hawley, Kathlynn Lewis

Executive Summary

1. Progress and critique implementing 2009 CAC 4
   a. Agriculture/Forestry/Land Use not included in 2009/2013 CAC

2. Comparison to Peer Universities 4

3. Goals and Pathways to Reducing Agricultural Operations GWP 6
   a. Summary Goals and Pathways
   b. Expanded Pathways

4. Impacts of Agriculture, Forestry, Land Use Goals and Pathways 8
   a. GHG emissions: compost facility, tree policy,
   b. Virginia Tech Composting Facility at Kentland Farm
      i. Economic costs and benefits
      ii. University benefits from compost facility
   c. Cost and benefits of Tree Policy and Urban Tree Canopy Goal
   d. Costs and benefits of agrivoltaics
   e. Climate Action Living Laboratory benefits
   f. VT reputational benefits

5. Background, Analysis, Rationale 14
   a. Data on Agriculture, Forestry, Land Use Operations
   b. Analysis of data and options
      i. GHG emissions inventory
      ii. Compost facility GHG analysis
      iii. Methane digester GHG analysis
      iv. Agrivoltaics solar production analysis

6. Proposed immediate initiatives and projects 20
   a. University Compost Facility at Kentland
   b. Agrivoltaics test array at Catawba Sustainability Center
Executive Summary: Agriculture, Forestry, and Land Use

The VT CAC Subcommittee on Agriculture, Forestry and Land Use explored opportunities for these Virginia Tech operations to reduce GHG emissions, improve efficiency, produce clean energy, and promote climate action and sustainability educational programs. The subcommittee developed an aggressive goal to achieve carbon neutral agriculture, forestry and land use operations by 2030 in the Blacksburg region.

Virginia Tech owns and manages considerable land area in the Blacksburg region and in the Commonwealth. In the region, in addition to the main campus footprint, VT owns and manages 3,500 acres of agricultural lands including the 1,950-acre Kentland Farm. There are about 1,300 acres of additional VT forested land in the area including the 1,150-acre Fishburn Forest on Price Mountain. The 377-acre Catawba Sustainability Center in Roanoke County is included in our inventory.

Campus trees, including several old growth stands like Stadium Woods, play an important role in the campus environment with educational, recreational, environmental, and aesthetic benefits. Canopy cover is currently 14.7%, lower than average among peer universities in our region.

Campus lands play an historic and important part of the university’s educational programs especially in agriculture and forestry, as well as the natural and physical sciences, engineering, and other disciplines. Incorporating these lands and operations in the Climate Action Commitment can enhance another of our CAC goals, the campus Climate Action Living Laboratory.

Agricultural and forestry operations GHG emissions were not included in 2009/2013 CAC but are part of the 2020 VT CAC GHG inventory.

- In 2019, emissions totaled 11,297 metric tons (MT) CO\textsubscript{2}e and came from animal enteric fermentation CH\textsubscript{4} (58%, 45% from dairy cows), manure management CH\textsubscript{4} (31%), land application of manure and fertilizer N\textsubscript{2}O (6.5%), and equipment and vehicle fuel and electricity CO\textsubscript{2} (4.8%).
- Conservation tillage in VT cropland sequesters an estimated 1,271 MT and VT forested land has carbon sequestration benefit of 1,980 that is well documented. Total net A/F/LU GHG emissions in 2019 are 8,046 MT CO\textsubscript{2}e or about 3.3% of 2019 VT GHG emissions.

Animal enteric fermentation emissions amount to 58% of total VT agriculture emissions, about 2% of total VT GHG, and 3% of global emissions. Animal scientists at Virginia Tech are investigating practices that reduce methane generation, such as increasing ruminant digestion efficiency by adjusting feed rations and provision of dietary additives that reduce metabolism of rumen CH\textsubscript{4}-producing bacteria. Such scientific breakthroughs have the potential to reduce not only VT CH\textsubscript{4} emissions but also global animal GHG emissions.

Manure management CH\textsubscript{4} amounts to 31% of agricultural GHG emissions and 1% of total VT GHG. Two options for reducing GHG manure emissions that could be used in combination are composting and anaerobic digestion (AD) to produce usable methane.
- AD of VT livestock manure could produce about 200,000-220,000 m\textsuperscript{3}/year of CH\textsubscript{4} (7 billion Btu). If combusted for heat or a micro-turbine, this would offset the GHG emissions from the estimated 225,000 m\textsuperscript{3} CH\textsubscript{4} from manure handling or 1% of VT GHG.

Composting would reduce GHG emissions from, not only agriculture, but also from campus dining hall and other compostable organic waste. The GHG reduction value of composting depends on its landscape application, from 0.036 to 4.58 MTCO\textsubscript{2} per MT compost. Based on an assumed...
reduction of 0.42 MT CO₂e per MT of food composted, composting the current 550 MT of VT dining hall food waste would yield a reduction of 230 MT CO₂e, 0.1% of VT GHG. If compost were applied to disturbed, marginal soils the estimated reduction could be as high as 1% of VT GHG.

Agriculture, Forestry, and Land Use CAC Goal and Pathways

CAC Goal #6. Carbon neutral agricultural, forestry, and land use operations by 2030

Pathways

a. Develop the University Compost Facility at Kentland
   - Developing and operating the University Compost Facility at Kentland will reduce net animal waste GHG emissions, support soil health, relieve the need to purchase new land for future land application of animal wastes, and support sustainable agriculture education and research. The Facility will also provide significant benefits in management of campus organic wastes from dining halls, athletics, the vet school, and campus tree trimmings. Capital cost is estimated at $1.4-1.8 million with net operating cost of about $165,000/year.
   - Composting campus dining hall food waste at the facility would yield a reduction of GHG of 0.1-1% of VT emissions depending on type of land applied, with the higher estimate for disturbed, marginal soils.

b. Adopt Campus Tree Policy
   - Campus trees, including several old growth stands like Stadium Woods, contribute benefits to the campus environment. Forested cover comprises about 1300 acres of VT land, including 1150 acre at Fishburn Forest on Price Mountain. Canopy cover, currently at 14.7%, could be expanded to 25% through a Campus Tree Policy for additional environmental benefits.

c. Reduce agricultural and forestry net GHG emissions
   - The source of most VT agriculture/forestry/land use emissions is enteric fermentation from livestock, especially from the dairy herd. Animal emissions of methane are a global problem, and animal science research can increase ruminant digestion efficiency via adjusting rations and the use of additives that reduce metabolism of rumen CH₄-producing bacteria.
   - Agricultural and forestry programs can reduce net GHG emissions by increasing C sequestration; reducing manure GHG emissions via composting and, possibly, anaerobic digestion with methane recovery; increasing efficiency of operations; improving energy and fuel efficiency; and implementing agrivoltaics solar production.
   - Expand the collection of manure data (volume/mass and composition) to provide more accurate estimates of GHG contributions from animal operations and GHG reductions via the adoption of composting and/or anaerobic digestion.
d. Develop solar energy projects on VT agricultural lands
   ○ The 2020 VT CAC goal #2 is 100% renewable electricity by 2030, which it expects to achieve with at least 15 MW of solar capacity on Virginia Tech buildings and lands in the area. Land area on campus, Kentland Farm, Fishburn Forest, and Catawba Sustainability Center are prime candidates for solar development. 15 MW would require about 75-100 acres.
   ○ Develop solar farms on VT agricultural land to provide “agrivoltaic” multiple use solar and usable grazing/cropland. These agrivoltaic farms would provide unique research and educational opportunities, part of the campus Climate Action Living Laboratory.

e. Employ agricultural and forestry CAC projects as living laboratories
   ○ Increase climate awareness and implementable actions of students through sustainable agriculture experiential education programs at Catawba Sustainability Center and Kentland’s Homefield Farm.
   ○ The University Composting Facility at Kentland will provide a living climate action research and education laboratory for VT students and hands-on educational programming for waste management and composting professionals from Virginia and nearby states.

f. Expand the use of outreach and Virginia Cooperative Extension (VCE) to address educational and implementation of climate action commitments
   ○ VCE programming to elicit beneficial economic, ecological, and environmental changes draws upon science-based results through proven research. VCE should hire additional faculty and agents to promote sustainable cropping and animal agricultural practices that enable VT and Virginia State University to facilitate climate action change throughout the state and region. Adoption of such practices will reduce the vulnerabilities of our food systems and environment to climate change and associated crises, e.g., plant and human and other animal disease development and spread.

g. Offset any remaining net GHG emissions
   ○ In order to achieve zero net GHG emissions by 2020, credits developed by the agriculture and forestry sectors via solar agrivoltaic adoption, energy generated from anaerobic digestion of manure and other wastes, and C sequestration may need to be supplemented by purchasing carbon offsets.

Proposed Immediate Initiatives and Projects

The Subcommittee has identified two initiatives and projects that can and should be pursued between now and 2022 to jump start action that demonstrates the university’s commitment. Understanding the current budget constraints of the university, the Buildings Opportunities subcommittee identified five actions to implement as soon as practicable, including the following agriculturally-related:
   ● University Compost Facility at Kentland: the compost facility will provide a needed organic waste management system with benefits to agricultural operations and several campus organizations.
   ● Agrivoltaic Solar/Farmland Project at Catawba Sustainability Center should be part of VT’s initial stage of solar development because of its visibility and educational benefits.
Executive Summary

1. Introduction

2. Assessment of Progress Since 2009/2013 VTCAC

3. Peer University Comparison

4. VT CAC Renewables Goals and Pathways
   4a. The Fifteen 2020 VT CAC Goals
   4b. Summary Budget & Finance Goal and Pathways
   4c. Expanded Budget & Finance Goal and Pathways

5. Budget & Finance Impacts of Goals and Pathways
   5a. GHG Software Platform
   5b. Costs and benefits of University Compost Facility at Kentland
   5c. Cost and benefits to Renewable Energy Certificates
   5d. Economic costs and benefits of 100% renewable electricity and financing/ownership options
   5e. Costs and benefits of steam plant improvements and chiller upgrades.
   5f. Costs and benefits of 10-year energy management plan including auxiliary buildings
   5g. Arranging for energy efficiency retrofit in Leased buildings
   5h. Implementing LEED-Silver and ASHRAE 90.1 Standards, New VT Design Standards
   5i. Waste Management Costs and Benefits of Zero Waste Campus
   5j. Costs and benefits of transportation pathways
   5k. Costs and benefits of testbed Agrivoltaic project at Catawba Sustainability Center.
   5l. Costs of carbon offsets

6. Proposed Immediate Initiatives and Projects
   6a. Ongoing budgeted projects
   6b. New priority projects in need of funding/approval
   6c. Low/no cost/revenue neutral project/policy/planning initiatives

7. Background, Analysis, Rationale
   7a. Economic Analysis of Climate Action and Energy Options
   7b. Recent Virginia State Energy & Climate Policies Affecting VT CAC
Executive Summary

The 2020 Climate Action Commitment (CAC) prescribes substantial action to address climate change. Achieving the CAC will require financial and staffing resources. With limited university resources, especially as a result of the Covid-19 pandemic, CAC financial needs will be in competition with other needs and priorities of the university, including health, safety and security; academic excellence; quality student experience; affordable tuition and fees; competitive faculty salaries; and others. Concurrently recognizing these challenges and the need to act, CAC Goal #14 specifically focuses on the budget and finance issues associated with CAC implementation:

CAC Goal #14: Develop innovative budgeting and financing mechanisms to generate funding and staffing to achieve Climate Action Commitment goals

Various potential pathways have been identified for meeting this goal:

- Strategically invest university E&G and Auxiliary funds to implement the 10-year Energy Management Plan targeting academic and auxiliary buildings at a level of $5 million/year in energy efficiency projects with a cumulative 8-year financial payback.
  - The 2015-2020 Five-year Energy Management Plan invested nearly $3 million/year of academic (E&G) funds that resulted in efficiency improvements that averaged about a 5-year payback with energy cost savings. More creative funding mechanisms can address energy efficiency needs in auxiliary buildings (e.g., residence halls, dining halls, athletics). These buildings account for 45% of campus gross square footage.

- Major investment is needed to implement the pathways for renewable electricity both on VT buildings/lands and in the SWVA region. Options for development include:
  1. VT owned and developed projects on VT buildings/land, and
  2. Utility or 3rd party owned and developed projects on VT buildings/land and in SWVA with VT power purchase agreement (PPA).
     - Option (1) provides major VT capital investment but greater long-term return and control, while option (2) requires no VT capital but less long-term financial return. A combination of the two options may be necessary to meet the CAC renewables goals.

- As a unique power utility, VTES has opportunities, in partnership with APCO and 3rd parties, to invest in renewable energy projects that serve both campus and town customers.

- The Virginia Tech Foundation helps the university achieve its goals and can be a valuable partner in adopting and implementing the CAC in the following ways:
  - The VT Foundation should assess efficiency opportunities in its properties leased to VT operations and invest in cost-effective energy efficiency measures in these properties, lowering university utility bills to offset increased lease cost to finance improvements.
  - The VT Foundation should invest in projects to implement the VT CAC that provide a return to the Foundation. These may include solar projects on Foundation buildings, and/or solar projects on VT or Foundation-owned land.
As the university moves toward carbon neutrality and the economy turns toward clean energy, the VT Foundation should assess the **fiduciary risk associated with its investment in fossil-fuel-reliant industries** as part of its portfolio.

The Foundation should broaden its investments to achieve **triple-bottom-line goals (financial, social, environmental)**. It is noteworthy that the CAC Working Group vigorously debated the issue of Foundation divestment from fossil fuels and different opinions are held among group members and the wider university community. However, consensus was reached among the WG on the need to strongly consider triple bottom line values in investment and other decisions.

- **Additional sources of funding** to implement the CAC should be pursued, including:
  - Federal and state grants and research funding for the Climate Action Living Laboratory
  - Development donor funds are also a potential source for some of the initiatives and projects needed to implement the CAC. Naming rights for a signature Zero-Net-Energy (ZNE) building or a signature solar farm located at the entry to campus are options.
  - **State funding** is also available for university project development such as Virginia DMME’s cost-sharing solar development fund to cover half the costs of solar projects.
  - Funding from **foundation and philanthropic organizations** can support implementation of the CAC especially elements related to innovation and academic programs.

- In addition to project funding, implementation of the CAC needs to **upgrade staff capacities** so that they can adequately tackle the needs of the commitment, especially in energy management, energy and utility systems, building design, waste management, compost facility operation, and campus sustainability.

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**Implementation: Short-Term Initiatives & Projects (2020-2022)**

Although the 2020 VT Climate Action Commitment focuses on 2030 as the target date for its goals, the pathway to those goals begins the day the CAC is officially adopted by the university if not before. The Working Group has identified a number of initiatives and projects that can and should be acted on in the short term (i.e., from now through to 2022) to get a jump start on necessary action and to demonstrate the university’s commitment with full understanding of the current budget constraints.

Proposed initiatives are listed below sorted by (a) ongoing and budgeted projects, (b) new priorities in need of funding and/or approval, and (c) low-cost/no-cost/revenue-neutral initiatives.

**a) Ongoing budgeted projects**

- Implement ongoing steam plant and chiller upgrade projects
- Evaluate new natural gas contract considering implications for CAC goals and pathways
- Purchase renewable energy certificates (RECs) to reach the 30% renewable electricity target in 2020
- Implement Design & Construction Standards in light of CAC Goals
- Fill the VT Energy Manager position and supplement staff as needed
- Implement budgeted projects in Parking & Transportation Plan
(b) New priority projects in need of funding/approval
- Develop a University Compost Facility at Kentland Farm
- Initiate 10-year energy management plan, 2021-2030, and develop first year projects
- Develop solar projects on campus (2.3 MW by 2022), including the Sterrett and other rooftop projects
- Fund and implement a zero-waste management consultant study
- Fund and implement Green Lab Program
- Dedicate consistent, annual funds to maintain existing trails, sidewalks, bicycle infrastructure
- Fund and implement transportation infrastructure plans (e.g., Multi-Modal Transit Facility)

(c) Low/no cost/revenue neutral project/policy/planning initiatives
- Establish framework for Climate Action Living Laboratory (CALL) through Provost’s Office, deans, and Facilities Department
- Revise mission and make-up of Energy & Sustainability Committee to oversee 2020 VT CAC
- Establish an alternative mobility subcommittee of the Transportation and Parking Committee
- Develop plan for steam plant resilience/redundancy needs to eliminate coal by 2024
- Develop a Utility Master Plan
- Initiate student project for Fishburn wind energy assessment
- Promote VT Electric Service (VTES)-Power and Energy Center (PEC) partnership as part of Climate Action Living Laboratory
- Initiate a partnership with Appalachian Power Co (our electricity provider) on renewable electricity development
- Initiate community relations with VTES Town customers
- Identify candidates for a new Zero Net Energy building on campus and develop fundraising plan
- Engage the VT Foundation in an energy efficiency retrofit plan for leased buildings
- Adopt Campus Tree Policy
- Seek external funding for agrivoltaics test array at Catawba Sustainability Center
- Implement and evaluate the 2020 Sustainable Procurement Policy
Virginia Tech 2020 Climate Action Commitment Working Group
Buildings Opportunities Subcommittee Report

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Labuski, Catie Grayson, Erin Nuckols, Yasmine Sikder, Allie Kahl

Executive Summary

1. Assessment of Progress achieving 2009/2013 VT Climate Action Commitment
   1a. Progress
   1b. Critique of Progress

2. Building Energy Efficiency: Peer and Exemplary Universities

3. VT CAC Buildings Goals and Pathways
   3a. Summary Goals and Pathways
   3b. Expanded Goals and Pathways

4. Impacts, Benefits, and Costs of Building Goals and Pathways
   4a. 10-year energy management plan including auxiliary buildings
   4b. Leased building energy retrofits
   4c. LEED-Silver and ASHRAE 90.1 standards, Design Guidelines
   4d. Energy-carbon neutral new construction
   4e. ZNE Showcase building

5. Background, Analysis, Rationale
   5a. Energy-Carbon Neutral Buildings
   5b. ASHRAE, LEED pathways to ZNE buildings
   5c. 2020 Design and Construction Standards
   5d. Signature ZNE Building
   5e. Energy savings through occupant evaluation and preference
   5f. 10-year energy management plan
   5h. Leased buildings included in 2020 GHG inventory
   5i. Green Lab Program

6. Proposed Immediate Initiatives and Projects
   6a. Formulate projects for Year 1 of 2021-30 10-year Energy Management Plan
   6b. Fill the VT Energy Manager Position and supplement staff as needed
   6c. Implement Design Standards in light of CAC Goals
   6d. Identify candidates for a ZNE building on campus and develop fundraising plan
   6e. Engage VT Foundation in energy efficiency retrofit plan for leased buildings
   6f. Green Lab Program
   6g. Relevant faculty and staff formulate Climate Action Living Laboratory (CALL)
       educational program for buildings
Executive Summary: 2020 VT CAC Buildings Opportunities Subcommittee

At Virginia Tech, buildings are places where we work, teach, research, learn, live, eat, and play. They are the Campus, the physical home and symbol of the Hokie Nation.

In addition, VT buildings account for more than 90% of campus energy use and GHG emissions. And they continue to expand. Construction projects in the pipeline will increase the occupied space on campus by 20% in the next five years.

As a result, the climate action commitment must begin with buildings. Although our 2020 CAC aims to achieve 100% renewable electricity, eliminating coal, and improving energy systems, they all serve building operations, and the pathway to carbon neutrality by 2030 depends on building energy use.

The Buildings Opportunities subcommittee evaluated progress made since the original 2009 CAC, reviewed related initiatives at peer institutions, developed new CAC goals and pathways to achieve them, assessed their implications, and identified initiatives that can be implemented in the next two years. This report summarizes those findings.

Progress. Since 2009, Virginia Tech has made significant progress in building energy efficiency and related GHG emission reductions even as the campus has grown by 24%. It has built new buildings and major renovations to LEED-Silver standards and invested $14 million in efficiency upgrades from 2015-2020. This has been a strong response to the 2009 CAC. But the commitment was limited by not including leased buildings, which encompass 13% of department space. In addition, the efficiency upgrades successfully focused on academic E&G buildings, but did not include auxiliary buildings, which make up another 45% of campus space.

Peer Comparison. While we have made progress in reducing energy and GHG emissions in buildings, other universities appear to have done more. For example, UVA has a larger energy management staff, UC-Berkeley has an 80% reduction goal for building emissions, Pittsburgh has a 50% energy reduction goal for existing buildings, SUNY-Buffalo is building a zero-net-carbon-certified residence hall, Cornell is developing an Earth Source Heat geothermal system to heat the campus, and Illinois-Urbana-Champaign established a “no net increase in space” policy.

2020 VT CAC Building Goals & Pathways. There are two principal 2020 VT Climate Action Commitment goals related to buildings, which are Goal #4 for new buildings and Goal #5 for existing building upgrades. Each goal has subgoals and a number of pathway steps to implement them, described in summary form on the next page. More detail is provided in chapter 3.

Immediate Projects/Initiatives. To get a jump start on necessary action and to demonstrate the university’s commitment, there are a number of initiatives and projects that can and should be acted on in the short term from now until 2022. Understanding the current budget constraints of the university, the Buildings Opportunities subcommittee identified six actions to implement as soon as practicable.

- Formulate projects for Year 1 of 2021-30 10-year Energy Management Plan
- Fill the VT Energy Manager Position and supplement staff as needed
- Implement Design and Construction Standards which incorporate CAC Goals
- Identify candidates for a ZNE building on campus and develop a fundraising plan
- Engage VT Foundation in energy efficiency retrofit plan for leased buildings
- Implement Green Lab Program
- Faculty and staff formulate Living Laboratory educational program for buildings
Goal #4. Reduce Building Energy Consumption to Enable Carbon Neutrality By 2030

4.1. By the end of 2022 reduce electricity consumption (kWh) by 10% and electricity intensity (kWh/gsf) by 20% below 2006 levels.

4.2. By 2030 employ energy management retrofit to reduce total energy consumption in buildings by 10% and energy use intensity (Btu+kWh/gsf) by 20% below 2020.

Potential pathway:
- Implement an aggressive 2021-2030 10-year Energy Management Plan updated annually can reduce total energy consumption in all buildings including auxiliaries by 10%.
- For leased buildings owned by the VT Foundation, work with the Foundation to develop financial arrangements to improve efficiency and reduce emissions.
- By 2021, use buildings and labs in the CAC Climate Action Living Laboratory, such as using Energy Dashboard online building data for instruction and research and a Green Lab program to reduce energy, emissions, and materials in our most energy-intensive facilities.
- Reduce building energy and GHG emissions by smart operations, such as demand response, digital controls, thermostat settings, occupant behavior, and innovative space scheduling especially in summer and to vacate space for invasive energy efficiency projects.
- Achieving these goals will require sufficient staffing in energy management.

Goal #5. Operations of new buildings initiated after 2030 will be Carbon Neutral

5.1 Continue to upgrade new building efficiency guidelines conforming to latest adopted LEED-Silver standards and ASHRAE 90.1 energy performance standards + 10%

5.2 By 2022, reduce total energy use intensity (EUI) in newly initiated buildings by 20% compared to 2020 existing buildings.

5.3 By 2026, build a signature zero-net-energy (ZNE) building on campus as a showcase and learning model for the Living Learning Laboratory

5.4 By 2028, newly initiated buildings’ efficiency improvements will reduce total energy use intensity (EUI) in new buildings by 40% compared to 2020 existing buildings

Potential pathway:
- In 2022, identify candidate new buildings for showcase zero-net-energy (ZNE) building and begin fundraising to attract donors to help fund the project to be completed by 2026.
- Electricity currently contributes 50% of total CO₂ emissions. 100% renewable electricity by 2030 will reduce building CO₂ emissions by more than 50%.
- By 2030, all newly initiated building design will have carbon neutral operations through 100% renewable electricity, improved energy efficiency, and carbon offsets.
- Post-occupancy evaluation (POE) should become standard practice to fine tune building operations and engage occupants to better serve users and reduce emissions.
- New buildings offer opportunities for Campus Living Learning Laboratory research and instruction by faculty and students through use of emerging technologies, monitoring energy use, air quality, and occupant perceptions, and other projects.
- Achieving these goals will require sufficient engineering and design staffing.
Virginia Tech 2020 Climate Action Commitment Working Group
Climate Justice Subcommittee Report

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**Executive Summary**

1. **Assessment of Progress Since 2009 VT Climate Action Commitment**
   1a. Overview of Climate Justice 3

2. **CAC Climate Justice Goal and Pathways**
   2a. Goal and Summary Pathways 6
   2b. Goal and Expanded Pathways 6

3. **Background and Rationale**

4. **Impacts, Benefits, and Costs of Goals and Pathways**
   4a. Contextualizing Impacts, Costs and Benefits in Light of the COVID-19 Pandemic 10
   4b. Impacts, Costs and Benefits to Virginia Tech 11

5. **Comparison to Peer Universities**

6. **Public Feedback**

7. **Proposed Immediate Climate Justice Actions**

8. **Appendix 1:**
   Letter of support from Virginia Tech’s American Indian Studies Program Faculty 16
Executive Summary: Climate Justice Subcommittee

Climate change will not impact all people equally. Historically marginalized and vulnerable groups will be (and indeed, already are) disproportionately burdened with the negative consequences of both climate change and also with the mitigation and adaptation approaches proposed to address the climate crisis. These groups, commonly referred to as “frontline communities,” often include Indigenous communities, people of color, low-income individuals, and people living in Global South nations.

The inequitable distribution of harms related to the climate crisis was the rallying cry for Virginia Tech for Climate Justice (VT4CJ), a group of students and faculty which, in September of 2019, organized a climate strike and advocated for the University to revise its Climate Action Commitment. The Climate Justice Subcommittee was the first subcommittee to be created as part of the Climate Action Commitment Working Group, and many members of VT4CJ have participated in the work of this and the other eleven subcommittees. The Climate Justice Subcommittee urges the University to embrace climate justice as a core value of the Climate Action Commitment. Climate justice, broadly defined, is a set of actions taken to address the economic, social, and institutional injustices against communities most affected by climate change and climate-change mitigation. Specifically, following Harlan et al. 2015\(^1\), we propose a four-pronged understanding of climate justice to be incorporated into the University’s climate planning:

1. Sharing the benefits and distributing the burdens of climate change mitigation and adaptation efforts equitably within and among communities and nations.
2. Engaging currently or previously marginalized groups as participants in decision-making processes aimed at mitigating and adapting to climate change.
3. Maximizing opportunities for marginalized groups to survive and thrive now and in the future.
4. Repairing historical harms against marginalized groups in the development of climate mitigation and adaptation efforts.

Taken together, these four elements of climate justice constitute a guidepost for university planning. Each builds upon the previous point to create a holistic consideration for dealing with climate injustices. Adopting this definition of climate justice, and incorporating it into climate-related planning, will place Virginia Tech as a leader among its international peers. Very few colleges and universities consider climate justice in institutional level-planning, and we have found no other universities with as robust a community responsibility as we propose.

Below, we provide a summary of the pathways we propose to place climate justice as a core value of Virginia Tech’s Climate Action Commitment. The body of our report further elaborates on and analyzes these pathways with specific recommendations. However, our recommendations represent only the beginning. Climate justice, like all forms of justice, must be an ongoing consideration, woven throughout the action plans of the other subcommittees, and built into future iterations of the Climate Action Commitment.

Goal 11: Establish climate justice as one of the core values of the Climate Action Commitment

Pathways:

- Encourage an accelerated transition to carbon-neutral status as a climate-justice imperative.
  - Assess the viability of renewable energy sources, such as geothermal, solar, and wind, for heating and cooling new buildings constructed on Virginia Tech’s campus.
  - Seek opportunities to transition the steam plant’s primary fuel source away from natural gas to renewable energy sources.
- Ensure that the social impacts of Virginia Tech’s climate mitigation choices (e.g. energy, land use, and waste) are identified and addressed to the greatest extent possible.
  - Consider the lifecycle impacts of all renewable energy procured systems to ensure they are sourced ethically and sustainably, manufactured with high standards for worker safety, and include a decommissioning plan for responsible, end-of-useful-life recycling.
  - For example, solar photovoltaic manufacturers should receive a score of 80 or higher on the Silicon Valley Toxics Coalition’s annual Solar Scorecard.  
- By 2021 establish a Climate Justice Advisory Board or Subcommittee to the revised Committee on Climate Action, Sustainability, & Energy (formerly the Energy & Sustainability Committee) with representation from students, faculty, and community members from frontline groups.
- Ensure that Virginia Tech’s climate action implementation plans recognize and assist vulnerable or frontline groups adversely affected by those plans.
  - Groups potentially affected by VT CAC plans include low-wage VT employees, tuition-paying students, Virginia Tech Electric Service (VTES) town-resident ratepayers, historically marginalized people of color and Indigenous communities, coalfield communities, and others.
    - Low-wage employees who cannot afford to live in Blacksburg should have access to affordable commuting options with low climate impact and local work-force housing.
    - VT CAC implementation should identify ways to mitigate potential increases of electricity costs for low-income VTES town customers and of tuition and fees for low-income students, should such increases result from the University’s climate-action commitments.
    - VT CAC renewable energy development should work with coalfield communities to establish locations for utility or 3rd party owned solar farms for Virginia Tech power purchase agreements.
- Establish education, research, and outreach programs to assist vulnerable and historically marginalized groups in their efforts to mitigate and adapt to climate change and thrive in the new energy economy. These efforts should specifically target Virginia Tribes, African Americans in the New River Valley, coalfield communities in southwest Virginia, and coastal Virginia communities threatened by climate-related hazards.

Many of these recommendations can be initiated immediately, and we recommend that the first immediate action taken be the establishment of a Climate Justice Advisory Board as a subcommittee of the Committee on Climate Action, Sustainability, and Energy (formerly called the Energy & Sustainability Committee). This Climate Justice Advisory Board should then begin a plan for the implementation of these recommendations.

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1. Executive Summary

2. Assessment of Progress in Implementing the 2009 Climate Action Commitment and Sustainability Plan

3. Comparison with Peer/Exemplary Universities

4. Engagement: Process, Findings, and Analysis

5. Goals and Pathways
   a. Goal and Pathways
   b. Recommendation #1: Governance
      Create a new Climate Action, Sustainability & Energy (CASE) Committee
   c. Recommendation #2: Operations/Implementation
      Chief CAS Officer to oversee all aspects of implementation
   d. Recommendation #3: Learning
      Establish a new Climate Action Living Laboratory (CALL)
   e. Recommendation #4: Annual review of Climate Action Commitment

6. Appendices
   a. Appendix 1 - VT Climate Action Commitment Update - Engagement Survey
   b. Appendix 2 - Raw responses to community survey
1. EXECUTIVE SUMMARY

The Engagement Subcommittee was established to lead the 2020 Climate Action Commitment update’s outreach and engagement efforts. Outreach to the wider community—including students, staff, faculty, alumni, and our neighbors—was deemed critically important to devising the best possible recommendations that account for the various interests, needs, and ideas among different stakeholders. Engagement involved information sharing, the collection of feedback, and the involvement of at least some stakeholders in deeper deliberations. The subcommittee also took responsibility for devising how governance and engagement should be structured as implementation moves forward.

One of the first tasks of the Engagement Subcommittee was reviewing progress to-date, which focused on identifying stakeholder involvement in previous climate action efforts. We found that the Office of Sustainability has been doing a laudable goal of tracking progress, sharing the results, and supporting action, while successfully encouraging very strong student involvement. As expanded upon below, one recommendation is to elevate the Office to increase its profile and influence, particularly within VT governance. Student and community groups also play integral roles in advancing climate and sustainability initiatives on campus.

It is clear that Virginia Tech can learn from other peers and exemplary institutions as we move forward with climate action. To this end, activities at various peer institutions were examined, including the University of Virginia, UC Berkeley, the University of Michigan, the University of Maryland, and Pennsylvania State. Key lessons learned from this review include:

- Establish clear engagement goals and processes
- Prominently identify goals and processes on relevant websites
- Nurture student groups as a way to foster change and engagement
- Create prominent cross-campus committees that bring together faculty, staff, students, and others to deliberate and advance efforts
- Establish funding mechanisms including grants to support efforts
- Form partnerships with local (neighboring communities and organizations) climate and sustainability efforts
- Integrate climate and sustainability principles/lessons into curriculum, both across different subjects and with explicit climate and sustainability programs
- Create ‘living laboratory’ infrastructure to foster operations-academic collaborations for teaching and research
- Design infrastructure, programs, and policies to effectively foster behavior change
- Enlist university community members (students and faculty/staff) as ‘ambassadors’ to spread awareness and promote change
- Create a high-level position (like a Chief Sustainability Officer) to champion action and push for resources and attention at the highest levels
- Comprehensively measure and communicate progress in meeting climate and sustainability goals

Engagement Process, Findings, and Analysis

The primary activities of the Engagement Subcommittee centered around facilitating information sharing, feedback collection, and deliberation with the wider VT community (and our neighbors). To this end, the following activities were conducted:
Each of these streams of engagement is further detailed below in this subcommittee report. Many involved substantial work on the part of the Engagement Subcommittee, and in particular the organization of the Zoom convenings in short order when COVID-19 made an in-person town hall meeting impossible. It is also noteworthy that the CAC process itself was broadly collaborative with more than 100 students, staff, faculty, and community members involved in the working group and various subcommittees.

Various good ideas both emerged and were affirmed through these processes, underscoring their potential value to the community. Key findings from these various engagement efforts include:

- The vast majority of (survey) respondents believe that climate change is a serious threat, and thus support aggressive action on the part of the university. In fact, many feel that VT is not doing enough

- The importance of setting ambitious goals and sticking to them was emphasized.

- Emphasis was placed on systemic or “upstream” solutions rather than placing the onus on behavior change of individuals, given that many of the barriers to action are infrastructural and institutional (e.g., poor cycling infrastructure)

- The above notwithstanding, many did see individual actions as important and needing of attention. Creative ideas emerged around how to, for example, ‘gamify’ desired actions

- Key champions are important for propelling further action, including potentially a higher-level champion within university administration. This may be partnered with a stronger Office of Sustainability

- There is strong support for taking a more holistic view of understanding our greenhouse gas emissions, accounting for emissions associated with community behaviors like commuting

- There is broad support for key actions proposed through the CAC update process, including:
  - A shift to carbon neutrality and 100% renewable energy. This would include integrating renewable energy infrastructure into campus design (e.g., solar on all new buildings). Agrovoltaics (integrating solar panels and agriculture) was also a popular proposal
  - Alternative transportation and reductions in private automobile usage, including with a ban on freshmen cars
  - Improved waste management, including with a new compost facility, consistent waste management systems across campus, and reductions at the source through purchasing decisions that minimize waste and promote sustainability
  - The creation of a ‘living laboratory’ to foster partnerships between campus operations, local partners, and the academic (teaching and research) enterprise. This should be part of concerted academic efforts to integrate climate change and sustainability into the classroom

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1 The central engagement website is: [https://svpoa.vt.edu/index/VTACRevision.html](https://svpoa.vt.edu/index/VTACRevision.html)

2 These are not unique people, as many participated in more than one session
○ A ‘green lab’ system, and similar programs to promote sustainable behaviors within work and student life spaces
○ Optimize building design, including with energy, water, and waste monitoring
○ The need to account for climate justice in any and all actions taken, including accounting for and ameliorating differential impacts of actions taken
○ Stronger partnerships with other institutions, including the Town of Blacksburg and other local governments (in particular with transportation and waste management)

● There is a strong desire to see engagement continue as the university shifts to implementation. In addition to the regular reporting already conducted, stakeholders are interested in ongoing engagement opportunities, yearly (or more frequent) flagship events like a ‘town hall’, and further ways to directly take ownership over actions.

Goal and Pathways

The engagement activities outlined above, research on peer institutions, collaborations with other subcommittees, and other research and brainstorming among the Engagement Subcommittee yielded the following recommendations. These recommendations are largely in service of goal #13 of the 2020 Climate Action Commitment update, which calls on the University to:

Establish the VT Climate Action Commitment as a dynamic process through deeper integration into university governance and operations at all levels, and regular evaluation of goals and progress with ongoing stakeholder engagement

The pathways recommended to achieve this goal are:

Recommendation #1 - Governance: Restructure the current Energy and Sustainability Committee (E&SC) to emphasize responsibility for university-wide oversight of implementation and evaluation. We propose that the E&SC committee be renamed the Climate Action, Sustainability & Energy (CASE) committee to emphasize the attention that must be paid to climate change, and be restructured in terms of membership, working subcommittees, and its place in governance. As part of this update, we recommend a slightly revised committee charge:

To review and provide advice concrete guidance to all facets of the University Administration on broad policy and implementation opportunities and issues relating to the implementation of the university's Climate Action Commitment and pursuit of environmental quality and social sustainability through policy, infrastructural and operational changes, education, and broad engagement, action, education, and engagement to address current needs without compromising the capacity and needs of future generations.

We also recommend that a set of standing subcommittees be created to support the work of the CASE Committee, including: Implementation committee; GHG Inventory; Climate Justice; Town-Gown Collaboration; Engagement & Structuring Sustainable Choices; and Education & student involvement.

Recommendation #2 - Implementation/operations: Appoint a high-level Chief Climate Action and Sustainability Officer (CCASO) to oversee and coordinate all aspects of implementation across the entire university. This person would be responsible for:

● Leading the development and implementation of university-wide climate and sustainability action plans
● Leading efforts to monitor implementation of climate and sustainability action plans
- Leading engagement efforts to ensure wide participation in climate and sustainability planning and implementation
- Coordinating a network of key climate and sustainability actors across all university units
- Leading climate and sustainability educational initiatives (both in the classroom and extracurricular)
- Facilitating partnerships between operational and research and educational units
- Managing a grant fund to allocate resources for climate and sustainability enhancements
- Chairing the CASE Committee and overseeing the Office of Climate Action, Sustainability, and Energy (OCASE), which would be elevated to become a university-wide unit
- Fostering meaningful town-gown and wider regional collaborations to advance shared climate, sustainability, and energy goals

This person would report jointly to the Provost and the Senior Vice President and Chief Business Officer. It is notable that the creation of the new CASE Office and CCASO position should not be at the cost of attention within the various operational and academic units. The goal of the office and officer should be to support these various efforts, not replace them.

Recommendation #3 - Learning: Establish a new Climate Action Living Laboratory (CALL) to foster and support relationships between operational units implementing new climate and sustainability initiatives (including but not limited to Facilities departments) and academic and research units both developing and teaching new technologies and approaches. The goals of the new CALL should be to:

1. Support collaborative educational opportunities on campus in the areas of climate action and sustainability.
2. Build bridges between operational and academic departments, and external community partners, facilitating and supporting opportunities.

The CALL should be situated under the reorganized OCASE. It should be structured to provide resources and other forms of support to achieve the above two goals. The work of the CALL may extend into curriculum development (e.g., creation of a new ‘pathways minor’ or even a core sustainability-focused pathways requirement). It is expected that the CALL would provide templates and best-practice guidelines for collaborative projects.

Recommendation #4 - Annual Review: Conduct an in-depth annual review of the CAC goals and implementation progress that involves student, staff, faculty, and community stakeholders. The results of this review will be shared publicly in an accessible and easy-to-read format. The newly reconstituted CASE committee will be charged with supporting the implementation of annual reviews. The GHG Inventory subcommittee will play a particularly important role by tracking emissions on an ongoing basis. However, other subcommittees are expected to play critical roles, and in particular those focused on engagement and outreach. A full-blown engagement process is not expected each year, but it is very important that the results of ongoing monitoring and assessment are widely disseminated. In addition to the traditional written assessment reports, we recommend that the CASE Committee and associated staff find novel ways to inform campus and the wider community, including through social media. Going beyond informing, the Committee should employ effective techniques to gather feedback from the community. Furthermore, we recommend that the university does consider holding more robust updates with some frequency - perhaps every five years.

These four pathway recommendations are outlined in further detail below in the Engagement Subcommittee report. As a next step, we recommend that the current E&SC committee be tasked with creating two ad hoc committees charged with fleshing out more complete proposals. One ad hoc committee would focus on how the new CASE committee and CCASO position could be structured and scoped. The other would focus on the design of the new CALL.
Executive Summary

1. Progress Assessment (VTCAC 2009 #3, #4, #6, #7)
   1a. Energy Progress: Reduction of GHG emissions despite campus growth
   1b. Steam Plant natural gas pipeline, conversion from coal to gas
   1c. APCO fuel mix
   1d. Investment in energy efficiency: new LEED buildings; 5-year Energy Management Plan
   1e. Chiller efficiency planning
   1f. Virginia Tech Electric Service
   1g. Critique of Progress: Limited GHG, limited VT CAC goals

2. Peer University Comparison

3. CAC Energy Goals and Pathways
   3a. Goals and Summary Pathways
   3b. Goals and Expanded Pathways

4. Impacts, Benefits, and Costs of Goals and Pathways
   4a. Costs and benefits of steam plant improvements and chiller upgrades.
   4b. Costs and benefits of 10-year energy management plan
   4c. Fill Energy Manager position, provide sufficient staff
   4d. Develop renewable electricity through power purchase agreements (PPA) and save capital to invest in energy efficiency

5. Background, Analysis, Rationale
   5a. Data on energy and electricity use
   5b. Virginia Tech Steam Plant History and Transformation
   5c. Chiller upgrade
   5d. 10-year energy management plan

6. Immediate Energy Initiatives/Projects
   6a. Implement ongoing steam plant and chiller upgrade projects
   6b. Evaluate new natural gas contract on implications for CAC goals and pathways
   6c. Develop plan for steam plant resilience/redundancy needs to eliminate coal by 2024
   6d. Initiate 10-year energy management plan, 2021-2030, and develop first year projects
   6e. Develop solar projects on campus: 2.3 MW by 2022
   6f. Develop Utility Master Plan
Executive Summary: Energy Opportunities Subcommittee

Virginia Tech’s direct energy use and consumption of electricity amounted to 90% of its GHG emissions in 2019. The campus centralized energy systems and electric utility date back to the founding of Virginia Tech and provide a proud history with continual improvement and integration within the university’s educational mission. For the last five years, VT energy systems are being transformed, and the 2020 Climate Action Commitment (CAC) sets the stage for further innovation.

The VT CAC Energy Opportunities subcommittee evaluated the energy progress made in response to the 2009/2013 VT CAC; compared that progress to our peer universities; and developed new climate action goals and potential pathways to achieve them. It also identified some energy initiatives and projects that should be pursued in the short term between now through 2022.

Progress: Virginia Tech has made considerable progress in managing its energy systems, called for by items 3, 4, 5 and 7 of the 2009/2013 VT CAC. It has reduced GHG emissions by 24% from 2006 while campus space and enrollment have grown by 22%.

There are three primary reasons for this reduction of emissions:

1. **Fuel switching** from coal to natural gas in the steam plant. The 2015 natural gas pipeline shifted coal dependence (97% in 2009) to natural gas (80% in 2019) with a significant decrease in GHG emissions.

2. **Apco’s electricity fuel mix** became less carbon-intensive, shifting from 90+% coal in 2006 to 63% in 2018. Apco electricity still amounted to 52% of VT GHG emissions in 2019.

3. **Investment in efficiency** has led to
   a. 36 new buildings and major renovations totalling 3 million square feet built to LEED green building standards; and
   b. Energy efficiency retrofit of energy systems and existing buildings through the 5-year 2015-2020 Energy Management Plan that invested $14.2 million in academic (E&G) buildings and resulted in energy savings estimated to pay back the investment in 5.3 years. E&G buildings reduced electricity use by 8% from 2015 to 2019 despite 1% space growth.

Still, the 2009/2013 VT CAC was limited in both its GHG footprint and in its vision for necessary GHG emission reduction. The footprint did not include agriculture operations or leased building space and the vision still would leave us with considerable GHG emissions in 2050. Our 2020 VT CAC aims to correct these limitations by adding previously omitted operations in the GHG footprint and choosing a bold and aggressive goal of becoming carbon neutral by 2030.

Comparison to Peer Universities. For energy systems peer review, we selected the University of Virginia (UVA), Penn State University, and University of Maryland (UMD). UVA aims to be carbon neutral by 2030 and fossil fuel free by 2050, and Penn State and the UMD respectively aim to reduce GHG emissions by 35% by 2020 and 60% by 2025. Each university has a clear plan with completed projects. UVA and Penn State incorporate renewable energy Power Purchase Agreements into their climate action plans. UMD has 9,000 solar panels on their campus. All three have a designated energy management office, and UVA and Penn State have an energy center. UMD utilizes the Energy Dashboard and Solar Dashboard tools to help manage its energy and display data for faculty, students, and staff.
2020 VT CAC Energy Goals and Pathways (see also Goals 1, 2, 4, 5)

Goal 3: Eliminate Coal after 2024 and Improve Efficiency of Campus Energy Systems

- **2015 natural gas pipeline** enabled steam plant coal fuel to drop from 97% in 2009 to 20% in 2019. With addition of gas boiler #12, we will have natural gas thermal capacity to be coal free.

- **For reliability and resilience**, to eliminate coal, the steam plant will need
  - **Backup fuel** (such as liquefied natural gas (LNG), biochar, or other fuel) when natural gas market is tight or unavailable, and
  - **Boiler redundancy** (termed “n+1”) in case of a boiler outage at a critical time. Converting a coal boiler to biochar or natural gas can provide this.
  - Scheduled upgrades to the steam plant will incur necessary costs of doing business. Eliminating coal and reducing GHG emissions should be part of those plans.

- VT’s **natural gas service contract** will be renewed June 2020 and the new contract will determine the conditions and need for backup, price terms, and possibility of some renewable gas.

  **Potential pathway:**

- By 2023, develop a **plan eliminating coal while providing resilience backup fuel** in cold weather or interrupted natural gas supply. The backup fuel need will be affected by the terms of the 2020 natural gas contract. Options include:
  - Liquefied natural gas (LNG). This can be provided by LNG storage at Old Southgate site where it can be tapped into the existing ATMOS pipeline ($1 million) or better yet at the steam plant if coal storage and baghouse emission control can be removed.
  - Renewable fuels, such as syngas or biochar.

- **Improve chiller efficiency:**
  - By 2023 the Chiller Plant Phase II project will reduce central chiller energy usage by 20% from 2020.
  - Future campus growth needs for chilled water will be met from central plants where possible.

- By 2023, develop a plan for **boiler n+1 resilience** backup, dependent on decision for back-up fuel.

- Continue to explore **options for renewable gas** from service provider’s contract as a means to reduce natural gas emissions and/or offset natural gas electricity from the steam plant cogeneration.

- As part of the Campus Climate Action Living Laboratory, engage faculty, staff and students to develop an online **Energy Dashboard** for users to obtain and analyze energy use data for campus facilities

- After 2025, explore geothermal and ground source heat pump systems and other **non-fossil-fuel options for heating new districts of campus**.
• In advance of moving toward a 2050 goal of being fossil-fuel free, the University should evaluate options for non-fossil fuel heating.
• New districts being considered on campus should evaluate hot water rather than steam heating systems. Understanding the extreme cost of extending steam tunnels, hot water systems sourced by the existing steam loop are already being explored for new districts.
• Conversion of steam to hot water central heating systems is being considered at other universities and offers the prospect of efficient geothermal and ground source heat pump heating and cooling systems in conjunction with renewable electricity.

Immediate Energy Initiatives/Projects. Although the 2020 VT Climate Action Commitment focuses on 2030 as the target date for most of its goals, the pathway to those goals begins the day the CAC is adopted, if not before. While understanding the current budget constraints of the university resulting from the Covid-19 pandemic, the Energy Opportunities subcommittee identified six actions to be considered for implementation as soon as practicable.

  • Implement ongoing projects to improve steam plant and upgrade chiller system
  • Evaluate new 2020 natural gas contract on implications for CAC goals and pathways
  • Develop plan for resilience/redundancy in steam plant to eliminate coal by 2024
  • Initiate the 10-year 2021-2030 Energy Management Plan, formulate Year 1 projects
  • Develop solar projects on campus using PPA: 2.3 MW by 2022
  • Develop a Utility Master Plan
VT GREENHOUSE GAS (GHG) FINAL REPORT:
CLIMATE ACTION COMMITMENT PROGRESS REVIEW AND
RECOMMENDATIONS

VT CAC WORKING GROUP - GHG SUBCOMMITTEE

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Spring 2020

EXECUTIVE SUMMARY 2

I. PROGRESS ASSESSMENT
   1. INTRODUCTION 4
   2. METHODOLOGY, SCOPE, DATA AND ASSUMPTIONS 4
   3. ANALYSIS AND EMISSIONS RESULTS 11
   4. IMPLEMENTATION PROGRESS CONCLUSIONS FOR CAC GHG ASSESSMENTS 13

II. PEER UNIVERSITY COMPARISON 14

III. 2020 CLIMATE ACTION COMMITMENT GOALS AND PATHWAYS 15

IV. BACKGROUND, ANALYSIS, AND RATIONALE 17
   1. GHG SCOPE EXPANSION AND ESTIMATES 17
   2. DATA COLLECTION SCOPE, METHOD AND PROCESS RECOMMENDATIONS 25
   3. COMMUNITY ENGAGEMENT MEETINGS AND FEEDBACK 28

V. REFERENCES 29

VI. APPENDIX 30
EXECUTIVE SUMMARY

VT has completed a Greenhouse Gas (GHG) Inventory and Assessment since 2007 as part of its Climate Action Commitment (CAC). GHGs are chemicals which, when emitted into the atmosphere, absorb heat and lead to global warming. A GHG Assessment, often called a carbon footprint, is a critical component of the CAC since it sets a baseline for campus emissions and goals. It also provides a means to quantify the various sources of emissions so that detailed plans can be developed for future emissions reductions. Without a good GHG Assessment, plans and goals may or may not reduce emissions and there is no accountability. Claims of carbon neutrality, which requires reducing or offsetting all included scope emissions to zero, require a GHG assessment to confirm compliance.

It is important to acknowledge that all GHG assessments are incomplete at some level. It is not possible, nor a good use of time and energy, to compile all GHGs over the life cycle of campus operations. Difficult choices are required to select the campus elements which are considered in and out of scope for carbon neutrality goals. Selecting a scope that is too large requires time-consuming analysis and efforts for minimal emissions, while selecting a scope that is smaller can miss significant emissions and opportunities to highlight and reduce some emission sources. Historically, campus carbon footprints generally include all of so-called Scope 1 (direct campus fuel use and fugitive sources) and Scope 2 emissions (utility electricity generation carbon emissions), and some Scope 3 emissions (all other emissions due to campus activities as well as utility transmission & distribution losses and upstream methane leakage). A wide range of decisions have been made for Scope 3 campus emissions among the peer institutions researched.

In-scope elements in the VT GHG Assessments have included campus purchased electricity, steam plant and building fuels, faculty/staff/student commuting, fleet vehicle and aviation fuel, water, wastewater, and solid waste. Using this scope, the VT carbon footprint has been dominated by purchased electricity and steam plant and building fuels which have accounted for approximately 90% of the campus footprint. Through aggressive campus energy system improvements, the transition of the steam plant fuel away from coal to natural gas, and a similar fuel switch by our electricity utility, VT emissions have been reduced almost 24% while campus square footage and enrollment have increased by more than 20% since 2006.

These significant improvements, however, are based only on carbon dioxide (CO$_2$) emissions. They do not include any methane (CH$_4$) emissions from upstream leakage of natural gas. Methane is a much more powerful GHG than carbon dioxide, and its omission from the scope of these assessments is important to note since much of the reductions are attributed to the use of natural gas which has lower combustion emissions than coal. Estimates of the overall emissions, including leakage of 2.0 - 2.5%, suggest that including their effects would increase the VT carbon footprint by approximately 7 - 9%. Natural gas extraction/distribution and the associated methane leakage is a controversial topic, especially in East Coast communities near hydraulic fracturing sites or close to new natural gas pipelines as is the case for Blacksburg. However, most universities consider these emissions out of scope and do not include them for carbon neutrality goals.
Past VT GHG Assessments have also left out of scope several other emission sources. Only carbon dioxide emissions have been estimated while methane (CH\textsubscript{4}) and nitrous oxide (N\textsubscript{2}O), primarily from agricultural operations as well as natural gas leakage, have been omitted. Emissions from the BT bus system, business air travel, dining service food, upstream utility transmission and distribution losses, and VT Foundation properties occupied by VT have also been omitted. Including all of these elements in scope is estimated to increase the VT carbon footprint by 41 - 54%.

Based on the GHG Assessment and analysis, the 2020 CAC recommends a Carbon Neutral Virginia Tech Campus by 2030, where carbon neutral is defined as net-zero emissions of CO\textsubscript{2}, CH\textsubscript{4}, and N\textsubscript{2}O by VT operations for all Virginia Tech owned lands and buildings on the main campus, all buildings leased by university departments in Blacksburg, and agricultural/forestry operations and lands in the Blacksburg region. The GHG scope for carbon neutrality will include all Scope 1 and 2 emissions. The following Scope 3 emissions will also be included based on the availability of data and feasibility of analysis: faculty/staff/student commuting, Blacksburg Transit (BT) bus fuel, waste/recycling/compost, water/wastewater, and commercial business travel.

Other Scope 3 emissions will not be included in 2030 carbon neutral scope, primarily due to challenges in and significant uncertainties in the accuracy of the data analysis. These include upstream leakage of methane from natural gas extraction and distribution and upstream emissions for dining hall food. These are the two emissions sources found to be excluded from the majority of peer institutions GHG assessments and carbon neutrality goals. However, since these emissions may be significant, can be controlled by operational or student choices, and are very important to some stakeholders on campus, these will be tracked and analyzed as part of the annual GHG inventory.

Emissions from other Virginia Tech locations across the state and in other countries will not be included in the 2030 carbon neutral scope. However, methods and protocols developed for the VT GHG Assessment will be shared by 2022 to other VT operations in the Commonwealth that will be encouraged to establish their own GHG reduction targets, goals, and pathways.

Feasible pathways to this 2030 carbon neutrality goal based on GHG analysis include:

- 100% renewable electricity by 2030 which can reduce emissions by 50% below 2019
- The elimination of coal use by 2024 can reduce GHG by 10% below 2019
- The reduction of energy use in existing and new buildings which can further reduce emissions by 10% despite campus growth
- The implementation of pathways in waste/recycling, transportation, agriculture, forestry, and land use which can reduce emissions by 10%

Remaining GHG emissions in 2030 can be negated by carbon offsets, preferably on campus or regionally.
Virginia Tech 2020 Climate Action Commitment Working Group
Peer Comparison Subcommittee Report

All Subcommittees, John Randolph, Allie Kahl

Executive Summary-Peer Comparison

1. Carbon Neutrality and GHG Inventory
2. Renewable Energy
3. Buildings
4. Energy Systems
5. Transportation
6. Waste-Recycling-Composting
7. Agriculture, Forestry, Land Use
8. Sustainable Choices
9. Climate Justice
10. Community Engagement
11. Budget and Finance
Executive Summary--Peer Comparison

One of the Working Group’s deliverables is a comparison of Virginia Tech progress in climate action to peer universities. There are three good reasons for this:

1. to see how we are doing,
2. to borrow and steal good ideas, and
3. to show we are not crazy with our bold and aggressive climate action.

Knowing that our perspective is comprehensive and that other universities have different strengths in different areas, we decided to have our specialty subcommittees select the peer and exemplary universities to assess in their specialty area. Those areas include

- Carbon neutrality and GHG inventory
- Renewable Energy
- Buildings
- Energy Systems
- Transportation
- Waste-Recycling-Composting
- Agriculture, Forestry, Land Use
- Climate Justice
- Community Engagement
- Budget and Finance

In most areas we selected 3-8 universities that we consider as peers or are exemplary in that area. Some are from Virginia, some are Land Grants, some are from the ACC, some are far away, but all offer good examples and benchmark our progress to-date and our aspirations for our 2020 Climate Action Commitment.

All in all, our peer review told us that, while our 2009 Climate Action Commitment was right for its time and has led to improved energy efficiency and reductions in GHG emissions, it now lags behind the actions of many of our peers. This deficiency is most notable in the quest for carbon neutrality, for renewable energy, for zero waste, for zero-net-energy buildings, for alternative transportation, and for community engagement to advance climate action and sustainable behavior.

Many of our related programs do stand up well in comparison to others, but if Virginia Tech is to regain its leadership role in climate action and sustainability, we need to move to a new Climate Action Commitment that is right for this time.

Of course, that is what we have set out to do, and we believe that we have found the right balance of aggressive, yet pragmatic climate action. Our goals are for carbon neutrality by 2030, 100% renewable electricity by 2030, investment in energy efficiency in existing and new buildings, carbon neutral agriculture, zero-waste campus, sustainable procurement, sustainable mobility, climate justice as a core value, and community engagement and the Climate Action Living Laboratory to integrate these goals into the fabric of the university.

Relative to our peer and exemplary universities reviewed in this analysis, this 2020 VT Climate Action Commitment is not crazy, it does borrow and steal great ideas from those exemplars, and it not only compares well to others but actually sets the stage for Virginia Tech to be an exemplar and leader in university climate action.
Executive Summary

1. Progress Assessment
   1a. Virginia Tech Electric Service: Proud History and Future Opportunities
   1b. Renewable Energy Progress Since 2009 VT CAC&SP
      ● 2009 VT CAC did not even mention Renewable Energy
      ● Draft Alternative Energy Plan (1/28/2020)
      ● 2017 Geothermal Heating Study
      ● Sterrett Solar PV and other pending rooftop projects

2. Peer University Comparison

3. VT CAC Renewables Goals and Pathways
   3a. Goals and Pathways
   3b. Expanded Pathways

4. Impacts/Benefits/Costs of Goals and Pathways
   4a. Benefits and costs of renewable energy certificates (RECs)
   4b. GHG emissions benefits of 100% renewable electricity
   4c. Economic costs and benefits of financing/ownership options
   4d. Impacts on VT and Town customer rates
   4e. Campus Climate Action Living Laboratory benefits
   4f. VT reputational benefits (VT Leader in Climate Action and Sustainability)

5. Background, Analysis, Rationale
   5a. Potential Pathway to 100% Renewable Electricity in Three Graphs
   5b. Potential Partnerships and Provision of Renewable Electricity
   5c. VT Smart Grid and Solar + Storage: VTES-Power & Energy Center (PEC) Collaboration
   5d. Renewable Electricity and Campus Climate Action Living Laboratory (CALL)
   5e. Agrivoltaics: Productive Farmland + Solar
   5f. Economic Analysis of Energy Options
   5g. Recent Virginia State Energy & Climate Policies Affecting VT CAC

6. Proposed Immediate Initiatives and Projects
   6a. 2020 RECs for 30% Renewable Electricity
   6b. Sterrett and other Rooftop Solar Projects
   6c. Student Project for Fishburn Wind Energy Assessment
   6d. Promote VTES-PEC partnership as part of Climate Action Living Laboratory
   6e. Initiate partnership with APCo on renewables
   6f. Initiate community relations with VTES Town customers
Executive Summary

Virginia Tech is unique in having its own electric utility Virginia Tech Electric Service (VTES), dating back to the 1890s when it made Blacksburg the first town in SWVA with electric power. The steam and power plant became instructional tools for electrical and mechanical engineering departments. The 2020 Virginia Tech Climate Action Commitment (CAC) calls for VTES to continue that role of advancing new technology integrated with the university’s educational and research mission.

The CAC Working Group’s Renewables Opportunities subcommittee of 14 faculty, staff, students and community members explored the possibilities for Virginia Tech to provide leadership in climate action by advancing renewable energy from non-carbon sources. It reviewed progress to-date; compared VT to peer universities; developed an aggressive goal and pathways to achieve it; and evaluated their impacts. The subcommittee also identified some energy initiatives and projects that should be pursued to demonstrate VT’s commitment in the short term between now through 2022.

Our aggressive goal is to have 100% renewable electricity by 2030. We have a long way to go. We have done little so far to develop renewables, and we lag well behind our peers including the University of Virginia and the College of William & Mary. We are constrained by a long term purchase agreement with Appalachian Power Company (Apco, a part of American Electric Power (AEP)). And we have been dealt a financial blow as a result of the Covid-19 pandemic.

But our pathways to 100% renewable electricity recognize these constraints and provide a realistic scenario for success in the next decade, supported by new state mandates and initiatives, a mutually beneficial partnership with Apco, creative financing through power purchase agreements (PPAs), and instructional and research benefits of renewable energy projects for the campus Climate Action Living Laboratory (CALL). Already VTES has formed a partnership with VT Power & Energy Center (PEC) to collaborate on VT Smart Grid research.

A collaborative partnership with Apco is a key component of our strategy, since the utility is now mandated to achieve 100% renewable electricity by 2050 with interim requirements for 14% by 2025, 20% by 2027, 30% by 2030, and 65% by 2045. VTES believes it can negotiate the 100% goal prior to the expiration of the current 2027 contract with AEP for no more than it is currently paying. Various opportunities of mutual benefit are already being discussed by VTES and AEP.

VTES can utilize a Portfolio Approach to achieve the renewable energy goal that include campus-based, VT-owned or 3rd-party-owned solar; direct purchase of power or PPA from Apco/AEP renewable sources, solarized customers within the Town, and a financial tool called Renewable Energy Credits (RECs). As a first step toward VT’s CAC leadership and renewables goal, VTES purchased RECs from Apco in March 2020 that achieved 30% renewable electricity for VT--two years ahead of the Governor’s 2022 deadline for state agencies.

Other short term initiatives recommended by the subcommittee include:

- 2020 RECs for 30% Renewable Electricity
- Implement Sterrett and other Rooftop Solar Projects
- Initiate student project for Fishburn Wind Energy Assessment
- Promote VTES-PEC partnership as part of Climate Action Living Laboratory
- Initiate partnership with APCo on renewables
- Initiate community relations with VTES Town customers
- Obtain external funding for agrivoltaics test array at Catawba Sustainability Center
Here is the 100% Renewable Electricity goal and pathways to achieve it:

VT CAC Goal #2: 100% Renewable Electricity by 2030

- **Solar energy projects on VT** lands and campus building rooftops. These can be VT owned or 3rd party owned with a VT power purchase agreement (PPA).
- **Power purchase agreements** (PPA) with utility or 3rd party-owned projects in Southwest Virginia.
- Other PPAs or virtual PPAs.
- **Assist Appalachian Power’s increasing of its renewable portfolio**, which is now 10% and by new state law is required to be 14% by 2025 and 30% by 2030.
- **Renewable energy certificates** (RECs) or purchased MWh credits from utility or 3rd party.

Achieving 100% renewable electricity by 2030 assumes **60% renewable generation** plus **30% APCO renewable portfolio** and **10% RECs** in recognition of steam plant cogeneration.

The pathways assume a combination of solar on **VT buildings and land** (15 MW) owned by VT or 3rd party PPA and 3rd party-owned and APCO-owned SWVA **PPA capacity** (130 MW+15 MW=145 MW).

**Capital costs** of VT owned solar systems are assumed to be $2/W for <0.5 MW projects and $1.50/W for >1MW projects.

- Total capital cost for 15 MW on VT buildings/lands would be about $25-30 million.
- Total capital cost for 145 MW would be over $200 million.
- Best PPA contract rates on the market are 20-year, non-escalating flat rate of ~7¢/kWh.

While utility/3rd party PPAs are assumed to be preferred approach for off campus solar projects, on-campus projects can be either VT-owned or utility/3rd party owned with PPAs.

- Advantages of VT owned and managed renewable systems are greater control, reduced long-term electricity cost and greater financial return; and disadvantages are high initial capital investment and operation/maintenance requirements; i.e. where small campus-based systems make sense and large utility-scale systems do not.
- Advantages of PPAs are little or no initial capital costs and no operation/maintenance cost; and disadvantages are potentially higher electricity costs and less operational control.

**Pathway: Potential development timeline and options:**

**2020:** achieve 30% renewable electricity via purchase of 20% renewable energy certificates (RECs) from APCO + APCO 10% renewable portfolio. VT achieves 2 years early the Governor’s E.O. 43 requirement that all state agencies procure 30% renewable electricity by 2030.

**2020-22:** 2.3 MW on VT bldgs/land including “signature” solar array perhaps on Old Southgate Dr.

- Option 1: VT finance and own: 2.3 MW @ $2/W = $4.6 million
- Option 2: 3rd party PPA: no upfront cost, pay per kWh; 25-year contract, 5 year buyback option
- Option 3: Sterrett 0.33 MW and 2nd building 0.67 MW through 3rd party PPA, learn from experience then VT finance and own remaining 1.3 MW ($2.6 million) signature project

**Beginning 2021:** Incorporate campus and region VT renewable electricity development by Virginia Tech Electric Service (VTES) into VT educational mission through **Virginia Tech Climate Action Living Laboratory** with faculty, student, and staff instructional, research, and outreach opportunities.

**2021:** assess VT Fishburn Forest atop Price Mountain and other sites for cost-effective wind energy; engage students/faculty and partner with JMU to conduct a wind study.
2022-27: Continue to work with APCo to be a primary customer of their renewable capacity as they develop it to meet state requirements. APCO just completed an RfP solicitation for 250 MW of renewables in March and as this capacity is developed, VTES could contract for the output. Under Virginia Clean Economy Act, APCO is required to achieve a 14% renewable portfolio by 2025, 20% by 2027, 30% by 2030, 65% by 2049, and 100% by 2050.

2022: 0.25 MW net-metered solar town customers doubled VTES distributed capacity. Customers cover cost but VTES could facilitate/incentivize customers with VTES Solarize program. RECs owned by customers, but VTES could buy their RECs.

2023: 0.5-1.0 MW community solar for VTES customers, possibly located on airport land off of Hubbard Dr. VTES would own RECs.
   - Customers buy shares in 100 kWh blocks for $10/block (10c/kWh) for 20 years.
   - Production 500 kW = 500 kW*1,314 kWh/yr/kW = 670,000 kWh/yr (6,700 shares)
   - Revenue = $67,000/yr * 20 yr = $1.34 million (present value = $1 million, 20 yr, 3%)
   - Capital cost: 500 kW * $2/W = $1 million

2025: add 10 MW solar capacity on campus and on VT land in region in cooperation with APCo (still within 2027. Use solar installations at Kentland Farm and Catawba Sustainability Center to study “agrivoltaics,” or agricultural production on solar farms. 10 MW @ 6 ac/MW= 60 ac.
   - Option 1: VT finance and own: 10 MW@ $1.50/W = $15 million
   - Option 2: 3rd party PPA: no upfront cost, pay per kWh; 25-year contract, 5 year buyback option

By 2027 (APCO contract renewal date), 50% renewable electricity via campus and VT land capacity (10 MW), APCo power purchase agreements (PPA) in southwest Virginia (including reclaimed mine land) (35 MW), APCo renewable portfolio (20%), and virtual PPA (VPPA) and/or RECs (10%) (e.g., 20% production (45 MW)) + 20% APCo portfolio + 10% purchased PPA/VPPA/RECs)

By 2027 or earlier, add 10 MW energy storage to campus renewable capacity and use VTES as a testbed and showcase for innovative smart micro-grid reliability and resilience research through a partnership between VTES and the VT ECE Power & Energy Center using shared SCADA data and in collaboration with APCo.

By 2029 add 95 MW solar capacity via campus and VT land capacity (+5 MW, total 15 MW) and PPA with APCo and/or 3rd party in southwest Virginia (+90 MW, total 120 MW).

By 2030, 100% renewable electricity with 60% renewable production (VT solar (15 MW) and APCo+3rd party PPA in southwest Virginia (130 MW)), 30% APCo renewable portfolio, and 10% VPPA and/or RECs

As with all components of this CAC, full lifecycle analysis should include the environmental and social justice costs and benefits of procured systems, including sources and decommissioning of photovoltaic systems, requiring end-of-life recycling.

Siting renewable energy systems should employ the best practices of public engagement to identify the most appropriate sites considering compatible uses and economic, environmental, and social effects

VT should work closely with VDMME to to take advantage of state grant programs for agencies and universities to meet the Governor’s Executive Order 43 and 2020 legislation.
Virginia Tech 2020 Climate Action Commitment Working Group
Structuring Sustainable Choices Subcommittee Report

Todd Schenk, Blake Bensman, Nathan King, Jack Leff, Allie Kahl, Drew Harris

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary</td>
<td>1</td>
</tr>
<tr>
<td>1. Introduction: Background &amp; Purpose</td>
<td>3</td>
</tr>
<tr>
<td>2. Comparison with Peer/Exemplary Universities</td>
<td>5</td>
</tr>
<tr>
<td>3. Goals and Pathways: Structuring Sustainable Choices</td>
<td>7</td>
</tr>
<tr>
<td>4. Virginia Tech Climate Action Toolkit (VTCAT)</td>
<td>12</td>
</tr>
<tr>
<td>4a. Infrastructure of VTCAT</td>
<td></td>
</tr>
<tr>
<td>4b. Potential Opportunities for Student Engagement</td>
<td></td>
</tr>
<tr>
<td>5. Reputational Benefits and Student Learning Outcomes</td>
<td>15</td>
</tr>
<tr>
<td>5a. Reputational Benefits Overview</td>
<td></td>
</tr>
<tr>
<td>5b. Connection to Aspirations for Student Learning</td>
<td></td>
</tr>
<tr>
<td>6. Proposed Immediate Initiatives and Projects</td>
<td>17</td>
</tr>
<tr>
<td>7. Covid-19 Addendum and Final Analysis</td>
<td>18</td>
</tr>
</tbody>
</table>
Executive Summary: 2020 VT CAC Structuring Sustainable Choices Subcommittee

The Structuring Sustainable Choices subcommittee was not one of the original groups created to support the 2020 Climate Action Commitment update. The idea of creating this subcommittee emerged later from the recognition that many of the challenges discussed during working group meetings involve, at their core, behavior change. That is to say, they are about the various choices individuals make that enhance or inhibit progress in meeting our climate and other sustainability goals.

Subcommittee members started by making a short list of “problematic” or unsustainable behaviors evident within the Virginia Tech community based on the Greenhouse Gas Inventory data. This list included: unnecessary car commuting, improper disposal of waste, unsustainable food choices in dining halls, and low return rates of reusable to-go containers in dining halls. The next step was to understand the underlying structures that enable or encourage these unsustainable behaviors. This is critically important because the group recognizes that behavioral choices are not just about individuals being educated and expected to make good decisions, but, perhaps more importantly, about how they are supported and nudged into making better or worse choices. The next step was thus to explore how structures could be changed to discourage unsustainable behavior, and more importantly, facilitate sustainable behavior.

Our model of understanding behavior change was informed by practice and scholarship in behavioral psychology and behavioral economics, and the associated domains of social marketing and choice architecture. It recognizes that sustainable choices are rooted in three key pillars:

- **education** around why certain behaviors may be more or less sustainable and what the more sustainable choices entail;
- **infrastructure** to make it easier to engage in sustainable behaviors and harder to engage in unsustainable ones; and
- **timely prompts** that remind people of the (more) sustainable choices they can make at appropriate junctures (i.e., when they are making decisions between behaviors).

The work of the CAC Structuring Sustainable Choices Subcommittee is largely embodied by Goal #12 of the 2020 Climate Action Commitment.
Goal #12. Diminish Barriers to Sustainable Behaviors through Both Institutional Change and Persuasive Social Marketing

Most of the goals of the 2020 Climate Action Commitment deal with strategies to improve the efficiency of buildings and energy systems, replace coal and add renewable energy infrastructure, develop a compost system, and enhance sustainable mobility. However, achieving carbon neutrality also depends on ensuring students and university employees are able to carry out their business sustainably. Including considering how much they recycle, compost, turn off lights, commute using a bike, and make a litany of other choices that reduce the university’s carbon footprint.

Recognizing this, the Climate Action Commitment Working Group has intentionally included several scope 3 emissions in our greenhouse gas inventory and associated carbon neutrality goal. Many of the scope 3 emissions are those resulting from behaviors, such as waste, water, commuting, and business travel. As discussed in the greenhouse gas inventory subcommittee section, this inclusion of scope 3 emissions distinguishes Virginia Tech from its peers and taking them seriously through restructuring choices to be more sustainable further solidifies our role as an environmental leader.

Sustainable choices are about structuring institutions and infrastructure to facilitate sustainable individual behaviors. By leveraging structural changes, incentives, disincentives, educational programs, and games, these choices can and must be made much easier, cheaper, safer, and more enjoyable. The Structuring Sustainable Choices group has focused on how university units can ‘nudge’ community members towards adopting behaviors that will reduce our greenhouse gas emissions.

Potential Pathways

We have identified the following potential pathways to encourage more sustainable behaviors:

- **Modify structures**—from waste management to transportation—to make sustainable choices easier
- **Identify unsustainable behaviors** on campus, the structures that support them, and then modify structures to make sustainable choices easier
- Nurture cross-campus partnerships to coordinate climate action and enhance sustainability initiatives
- Establish the Structuring Sustainable Choices Committee as a working group of the new Climate Action, Sustainability, and Energy (CASE) Committee (currently the Energy & Sustainability Committee (E&SC) to facilitate continued dialogue on structures and programs to enhance sustainable behavior.
- Partner with Experience VT and Dining Services/ Housing and Residence Life Sustainability Managers to integrate sustainability into the new Experience VT app. Experience VT allows students to learn more about the university’s commitment to sustainability and maximize their opportunity to engage in sustainability at VT.
- Craft an ongoing university survey that enables university departments to submit their own university sustainability goals, aspirations, and current infrastructure challenges that may prevent their goals/aspirations from being achieved.
- Develop a shared toolkit of best practices in social marketing, rooted in behavioral sciences, for campus groups initiating sustainability initiatives
- **Drive engagement** via social media and web pages using call to action opportunities, surveys, stories/interviews, facts/figures, event promotions, and ongoing reminders.
EXECUTIVE SUMMARY

2020 CAC GOAL #9. REDUCE TRANSPORTATION-RELATED GHG EMISSIONS BY 40% BY 2030
9.1 Reduce Single-Occupancy Vehicle Commuting To Campus By 20% By 2025

POTENTIAL PATHWAYS TO ACHIEVING TRANSPORTATION GOALS

1. ASSESSMENT OF PROGRESS IMPLEMENTING THE 2009 CAC&SP
   1a. PROGRESS
   1b. CRITIQUE OF PROGRESS

2. PEER/EXEMPLARY UNIVERSITIES COMPARISON
   2a. PEER COMPARISON — OUTSIDE VIRGINIA
   2b. PEER COMPARISON — WITHIN VIRGINIA

3. 2020 CLIMATE ACTION COMMITMENT GOALS AND PATHWAYS
   3a. SUMMARY GOALS AND PATHWAYS
   3b. EXPANDED GOALS AND PATHWAYS
   3c. POTENTIAL PATHWAYS TO ACHIEVING TRANSPORTATION GOALS

4. IMPACTS, COSTS AND BENEFITS OF GOALS AND PATHWAYS
   4a. GREENHOUSE GAS EMISSIONS BENEFITS
   4b. OTHER BENEFITS AND COSTS

5. BACKGROUND, ANALYSIS AND RATIONALE
   5a. TRANSPORTATION PLANS
   5b. WHAT THE LITERATURE TELLS US ABOUT ACTIVE TRANSPORTATION BENEFITS
   5c. TRANSPORTATION SURVEY AND RESULTS
   5d. TRANSPORTATION OPPORTUNITIES ZOOM CONVENCING

6. PROPOSED IMMEDIATE INITIATIVES/PROJECTS
   6a. INFRASTRUCTURE AND POLICIES CURRENTLY UNDER DEVELOPMENT
   6b. NEAR-TERM PRIORITIES
EXECUTIVE SUMMARY

The 2020 Climate Action Commitment (CAC) subcommittee on Transportation Opportunities included a group of 12 faculty, students, staff, and Town members seeking to enhance Virginia Tech’s mobility patterns to reduce environmental effects and improve the livability of the campus community. The subcommittee assessed progress made to implement the 2009 VT CAC and Sustainability Plan (SP), compared the VT experience to peer universities, and developed a new set of transportation goals and pathways as part of the 2020 VT CAC.

The public guidelines in response to the COVID-19 pandemic will likely continue through fall 2020. They present a challenge across the transportation sector to facilitate safe, physically-distant movement through campus between classes and during daily commutes. An immediate priority for the health and safety of our students, faculty, and staff is to provide additional space beyond sidewalks and the limited bicycle lanes for walking and bicycling. Immediate actions taken to improve walkability and bikeability will go towards showing Virginia Tech's commitment to prioritizing health and safety during this crisis. Furthermore, this provides a longer-term platform for alternative transportation, which otherwise may decline if students see driving to campus as their only choice. It should also be noted that teleworking and on-line instruction became the norm in the spring and will be a mainstay for the fall. There are lessons to be learned about patterns of working and instruction that reduce needs for car commuting to campus and resulting reduction of traffic and emissions.

Transportation Greenhouse Gas (GHG) Emissions

The overall goal of the VT 2020 CAC is to achieve carbon neutral campus operations by 2020. How does transportation relate to that goal? Virginia Tech transportation-related GHG emissions for the 2020 VT CAC include:

- Scope 1 GHG: fuel for fleet vehicles and other campus vehicles, aviation fuel for VT airplanes.
- Scope 3 GHG: student, faculty, staff commuting to campus; Blacksburg Transit (BT) fuel; business air travel.

The 2009 VT CAC & SP did not include BT or business air travel. 2019 transportation GHG emissions under this more limited scope were about 20,000 MT CO₂e, 8.4% of total VT emissions. About 80% were from commuting, 13% from fleet vehicles, and 7% from aviation fuel.

The 2020 CAC addition of BT fuel adds 3515 MT CO₂e or 1.4% of total VT emissions and business air travel adds 5000-7500 MT CO₂e or 2-3%. Overall, transportation 2020 GHG scope will be about 12% of total VT emissions.

Progress. Since the 2009 VT CAC & SP, Virginia Tech and Blacksburg have made considerable progress in developing alternative transportation choices, including

- A 50% increase in BT ridership;
- BT has nine hybrid-electric buses of its 53-bus fleet; BT has also ordered five electric buses;
- A 32% increase in campus bicycle rack capacity (since 2013);
- The launch of Roanoke bike share (since 2018, 11,000 trips and 28,000 miles);
- Shuttles and bus service to Roanoke and Northern Virginia;
- Car- and ride-share programs; and
- Recognition as a Best Workplace for Commuters every year since 2009 (Best of the Best in 2014) and as a Bicycle Friendly University at the bronze level (2012-18) and silver level (2019-22).

The 2016 Parking and Transportation Master Plan calls for further improvements in bicycle infrastructure and parking management, and Beyond Boundaries 2047: The Campus Plan includes the Infinite Loop and Green Links to improve mobility for all users.

However,

- Single-occupancy vehicle (SOV) commuting increased 10% from 2014 to 2018;
- There is an oversupply of parking (2000 spaces sit empty on any given day);
- Parking permit prices are cheap and provide no incentive for alternative commuting;
- Student orientation and employee onboarding do not include education on transportation options;
VT is one of only a few universities that allow freshman to bring cars to campus; and
University motor pool vehicles do not use alternative fuels.

The subcommittee’s guiding principles in developing goals and pathways were to:
- Prioritize moving the most people over moving the most cars;
- Emphasize safety;
- Consider equity issues;
- Emphasize collaboration with the Town of Blacksburg and other localities; and
- Develop cost-effective solutions.

The principal goal below relates to reduction of GHG emissions in accord with the overall CAC to strive for carbon neutrality by 2030. But the subgoal to reduce SOV commuting, and the pathways to enhance alternative transportation and pedestrian and bicycle mobility, speak more to making the campus a more livable environment.

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**Goal #9. Reduce Transportation-Related GHG Emissions 40% from 2020 levels by 2030**

**9.1 Reduce Single-Occupancy Vehicle Commuting To Campus 20% from 2020 levels by 2025**

**Potential Pathways to Achieve Transportation Goals**

a. **Make walking/bicycling/transit the preferred means of commuting to campus.** Use parking policies, alternative transportation programs, campus mobility planning in collaboration with the Town of Blacksburg, and BT programs to improve safety and convenience and promote walking/bicycling/transit.
   - By 2022, provide better data on student and staff commuting behavior and reasons for that behavior through surveys and other means to monitor progress.
   - **Promote sustainable mobility choice** through good marketing including social media, parking permit literature, university promotion literature/website, student orientation materials, and other means.
   - Follow other Virginia universities in **prohibiting freshmen** from being able to purchase a parking permit to help students develop less car-dependent culture and behavior.
   - **Enhance BT** as a commuting choice through education, marketing, coordinating with other transit orientations, development of the Multi-Modal Transit Facility (MMTF), and other means.
   - Upgrade VT’s **Bicycle Friendly University ranking** from silver to gold.
   - Parking demand management.
     - Increase parking permit prices. For employees, implement on a sliding income-scale. Use additional revenue to fund sustainable transportation improvements.
     - Consider moving away from annual and toward automated daily fee parking permits so people have to think about paying for parking every time they drive to campus.

b. **Promote non-commuting work and learning opportunities**
   - Based on experience from COVID-19 pandemic, promote teleworking, innovative online instruction, video conferencing, compressed workweek schedules, and other means to reduce travel demand.
   - Work with Human Resources to identify opportunities and barriers to increasing teleworking.

c. **Improve infrastructure and traffic controls to improve mobility choices and safety**
   - **Improve safety** of vehicle, bicycle and pedestrian mobility on campus.
     - Reduce the speed limit on all core campus streets to 15 miles per hour.
     - Improve lighting on walking and bicycle paths.
     - Maintain shared-use paths and bicycle lanes.
     - Improve network connectivity and consistency throughout campus.
     - Limit/restrict vehicles in the core of campus by gating streets at strategic locations (consider Drillfield Drive, Alumni Mall, Kent Street, West Campus Drive, and Stanger Street).
• Implement infrastructure recommendations in the Parking and Transportation Master Plan and Beyond Boundaries 2047: The Campus Plan.
  o Infinite Loop, Green Links, Expand Bicycle Lanes on Kent Street and Washington Street
  o Multi-Modal Transit Facility
• Coordinate with Town transportation and corridor plans to improve connectivity and safety between campus and town.

d. Improve vehicle efficiency and promote low-carbon emissions vehicles
• Require University fleet vehicle purchases, and encourage BT, to emphasize fuel efficiency through zero-emission, hybrid, and electric vehicles.
• Although transportation emissions per vehicle-mile will naturally decline with improved vehicle efficiency and increased electric vehicle ownership, changes in commuting mode are necessary to achieve GHG reduction goals and a more livable and less car-oriented campus.
• Support electric vehicle use by installing a mix of charging station types in parking garages, at Fleet Services, and at other locations.

e. Promote social equity in mobility and parking policy
• Develop effective and efficient commuting options for lower-wage employees who cannot afford to live in Blacksburg, including vanpools, park & ride lots, and other means.
• Implement sliding income-scale pricing for parking permits.
• Collaborate with the Town to provide affordable workforce housing proximate to campus.
• Build more residence halls on campus to free up more off-campus housing for staff.

f. Reduce and negate business travel GHG emissions
• Encourage car sharing and transit use for business travel.
• By 2030, negate business airline travel emission with carbon offsets.

g. Establish an alternative mobility subcommittee of the Transportation and Parking Committee to recommend strategies to increase non-SOV mode share on campus.

In addition the subcommittee recommended initiatives and projects that could be implemented in the short term (2020-2022) to get a jump-start on action and demonstrate the university’s commitment.

1. Follow through on Infrastructure and Policies Currently under Development
Several projects are under various stages of development and will go a long way toward helping to achieve the goals presented herein:
  • Infrastructure: Construct the Multi-Modal Transit Facility; Extend the Kent Street bicycle lane towards the Drillfield; Construct green bicycle lanes in strategic areas where known safety problems exist; Construct the green link from the Perry Street area to Burruss Hall; Replace 16 remaining substandard bicycle racks; Improve lighting and accessibility of existing trails, sidewalks, and crosswalks.
  • Policy: Update Policy 5005, regulating personal transportation devices on campus.

2. Near-Term Priorities
• Establish an alternative mobility subcommittee of the Transportation and Parking Committee
• Install/improve bicycle lanes on Washington Street and Kent Street.
• Dedicate consistent, annual funds to maintain trails, sidewalks, bicycle lanes, bus stops, bike racks, etc.
• Require University fleet vehicle purchases to emphasize fuel efficiency
• Parking permit restructuring: Prohibit on-campus freshmen from purchasing a parking permit; Increase the price of a faculty/staff parking permit and implement an income-based sliding scale.
Virginia Tech 2020 Climate Action Commitment Working Group
Waste/Recycling/Composting and Procurement Subcommittee Report

Blake Bensman, Denny Cochrane, Brandon Hendricks, John Randolph, Annie Pearce, Greg Evanylo, Jody Booze-Daniels, Rob Lowe, Reed Nagel, Casey Underwood, Anthony Purcell, Anthony Watson, Jennifer Russell, Greg Canaday, Teresa Sweeney, Amy Klinger

TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary</td>
<td>1</td>
</tr>
<tr>
<td>1. Assessment of Progress in Implementing 2009 CAC&amp;SP</td>
<td>5</td>
</tr>
<tr>
<td>1a. Progress</td>
<td></td>
</tr>
<tr>
<td>1b. Critique of Progress</td>
<td></td>
</tr>
<tr>
<td>2. Comparison with Peer/Exemplary Universities</td>
<td>8</td>
</tr>
<tr>
<td>3a. Summary Goals and Pathways</td>
<td></td>
</tr>
<tr>
<td>3b. Goals and Pathways</td>
<td></td>
</tr>
<tr>
<td>4. Impacts, Benefits and Costs of Goals and Pathways</td>
<td>12</td>
</tr>
<tr>
<td>4a. GHG emissions benefits</td>
<td></td>
</tr>
<tr>
<td>4b. Waste management costs and benefits of Zero Waste Campus</td>
<td></td>
</tr>
<tr>
<td>4c. Virginia Tech Composting Facility at Kentland Farm</td>
<td></td>
</tr>
<tr>
<td>4e. Climate Action Living Laboratory educational benefits</td>
<td></td>
</tr>
<tr>
<td>4f. VT reputational benefits</td>
<td></td>
</tr>
<tr>
<td>5. Background, analysis, rationale</td>
<td>15</td>
</tr>
<tr>
<td>5a. Waste Management at Virginia Tech</td>
<td></td>
</tr>
<tr>
<td>5b. History of Composting</td>
<td></td>
</tr>
<tr>
<td>5c. Green Lab Program</td>
<td></td>
</tr>
<tr>
<td>6. Proposed immediate initiatives/projects</td>
<td>19</td>
</tr>
<tr>
<td>6a. Secure Funding and Develop University Compost Facility at Kentland</td>
<td></td>
</tr>
<tr>
<td>6b. Contract Zero Waste Consultant to conduct VT Waste Audit</td>
<td></td>
</tr>
<tr>
<td>6c. Implement and Evaluate Sustainable Procurement Policy 2020-2022</td>
<td></td>
</tr>
<tr>
<td>6d. Implement Campuswide Green Lab Program</td>
<td></td>
</tr>
</tbody>
</table>
Executive Summary

Virginia Tech to become a Zero-Waste Campus by 2030!

The Climate Action Commitment Work Group’s Subcommittee on Waste, Recycling, Composting and Procurement took a fresh look at all aspects of campus waste management and procurement with the intent of identifying opportunities to minimize waste, increase efficiencies, improve environmental effectiveness, and reduce costs. We wish to apply to Virginia Tech the concept of Circular Economy or systems that employ reuse, sharing, repair, refurbishment, remanufacturing and recycling to create a closed-loop, minimising the use of resource inputs and the creation of waste, pollution and carbon emissions. To do that we must look at our materials flow, what comes into the university (Procurement) and what goes out (Waste and Recycling).

We began by conducting a comprehensive assessment of Virginia Tech’s current waste management program. We critiqued our progress towards meeting the waste management goals as outlined in the university’s original 2009 Climate Action Commitment and subsequent revision in 2013. Using the Association for the Advancement of Sustainability in Higher Education’s “Sustainability Tracking, Assessment, and Rating System (STARS)” protocol, we compared our progress to that of our peer/exemplary institutions, as well as to those in the Commonwealth of Virginia. The Procurement Department plays a vital role in materials management, and we include their new Sustainable Procurement Policy. This report presents the 2020 CAC Waste, Recycling, Composting and Procurement Goals and pathways to achieve them, describes the pathways benefits and costs, and proposes four related initiatives worthy of immediate action.

Waste management at Virginia Tech is functional but is complex and fragmented across a number of departments, including Facilities Building & Grounds (trash and recycling from all buildings), Dining Services (food waste composting from 11 dining halls), Environment Health & Safety (hazardous and electronic waste), animal waste by relevant departments, Procurement for disposition of surplus property, and construction contractors for construction waste.

Virginia Tech partners with local jurisdictions in the Montgomery Regional Solid Waste Authority (MRSWA), through which solid waste is sent to the New River Resource Authority’s landfill near Dublin and principal recyclable materials (PRM) are sent to Recycling and Disposal Solutions in Roanoke. Food waste composting, considered a recyclable material, is transported 77 miles to Royal Oak Farm (ROF) near Lynchburg, the only state permitted facility within 100 miles of Blacksburg.

Progress since 2009: In 2004, Virginia Tech had a recycling rate of 18% and doubled it by 2009. The 2009 Virginia Tech Climate Action Commitment (VTCAC) Point #8 stated: “Virginia Tech will adopt a goal of 35% recycle rate by 2012 and 50% by 2025.” By 2012, the rate had increased to 44% as a result of food waste composting, so the 2013 revision to the VTCAC moved up the target date for 50% recycling rate from 2025 to 2020.

The local recycling facility Poplar Manor Enterprises went out of business in 2015, resulting in a three-year dip in our recycling rate until the new composting contract with ROF in 2017. The recycling rate has averaged about 40% since 2013. In 2019, 2,000 tons of waste were recycled (including 566 tons of food waste composting), and 4,000 tons of trash sent to the landfill. We achieved a 38.8% Recycle Rate and a 79.9% Waste Diversion Rate (waste diverted from landfill).

The Waste Management Program at Virginia Tech is functional; however, there are notable opportunities for improvement. The Subcommittee recommends having a waste audit to explore options of more efficient organization and management of trash, recycling, food waste, and other wastes. It also recommends the University develop a compost facility to process all campus food waste and animal and other organic waste.
Comparison with Peer and Exemplary Institutions. Based on the Association for the Advancement of Sustainability in Higher Education’s (AASHE) Sustainability Tracking, Assessment, & Rating System (STARS), recognized at the national level as the best sustainability management tool for colleges and universities, Virginia Tech compares very well to its peers. From 2011 to 2017 Virginia Tech has received four STARS Ratings (2 Silver and 2 Gold). We earned our second STARS Gold Rating on December 19, 2017, with a score of 71.94. To date, this score represents the highest achieved for all colleges and universities in the Commonwealth of Virginia, and at that time was the highest achieved for any institution in the Atlantic Coast Conference.

We used STARS ratings to compare our waste management with peer and exemplary institutions, including: Penn State, Ohio State, Auburn, North Carolina State, Maryland, Clemson, Florida State, and Tennessee. In addition, we compared our performance with several Virginia schools: University of Virginia, William & Mary, Virginia Commonwealth, James Madison, George Mason, and Radford. While we have made significant waste management progress in the past two decades, clearly we have room for improvement. Several of the peer universities have higher recycling rates, many are working toward becoming a zero-waste campus, and some have university compost facilities.

2020 VT CAC Goals and Pathways: Waste/Recycling/Compost + Procurement

2020 VT CAC Goal #7. Virginia Tech to become a Zero-Waste Campus by 2030

As defined by industry, a “Zero-Waste Campus” has a 90% or greater Waste Diversion Rate or waste kept out of the landfill (Source: Zero Waste Alliance).

7.1. Increase waste diverted from landfill-including construction waste- to 85% by 2025.

For CY 2019, Virginia Tech achieved an 80% waste diversion rate. For the past decade the rate has averaged 70%, with a low of 47% (2066), and a high of 84% (2011, 2012). The waste diversion rate takes credit for construction waste from new construction and major renovations. In a robust construction year, the waste diversion rate will increase significantly. The university owned quarry produces about 1,000 to 2,000 tons/month of Hokie Stone scrap material or overburden, which is crushed into useful gravel and can be included in diverted waste.

7.2. Increase waste recycling rate to 55% by 2025.

For CY 2019, Virginia Tech achieved a 39% recycle rate. Recycling rate has remained relatively constant at or near 40% for the past decade.
For CY 2019, Virginia Tech recycled a total of 2,000 tons of principal recyclable materials:
- 750 tons sent to MRSWA at a cost of $25,875 ($34.50 per ton) plus contractor cost for storage containers and collection and transport fees; and
- 566 tons of food waste for composting sent to ROF at a cost of $84,900 ($150 per ton) plus contractor cost for collection and transport of food waste to the ROF sledge container at Prices Fork Closed Landfill.
- 684 tons sent to a number of other organizations with varying costs

7.3. Reduce waste to landfill per faculty/staff/student by 25% by 2025.

For CY 2019, Virginia Tech sent 4,000 tons of trash (municipal solid waste) to the landfill or 200 pounds per person based on a university population of 40,000. The goal is to reduce this by 25% or to 150 pounds per person by 2025.
Pathways to Goals:

a. To enhance campus waste management, hire a Zero-waste Consultant to conduct a waste audit study and plan to evaluate current organization, equipment, procedures, and staffing. A third-party zero waste consultant is critically needed to objectively evaluate waste operations for E&G facilities, auxiliaries, and the athletic department to identify opportunities to streamline operations, maximize efficiencies and reduce costs.

b. Improve Oversight of Waste/Recycling/Composting
Based on consultant recommendations, improve organization of waste management with options of hiring a waste manager to manage all aspects of campus waste management or coordinating existing personnel and activities through a Waste/Recycling Council to help streamline operations and reduce redundancies.

c. Develop University Compost Facility at Kentland to process campus organic food waste, veterinary and agricultural animal waste, yard trimmings and other compostables. For CY 2019, 566 tons of food waste for composting was sent from our 11 dining facilities to Royal Oak Farm (ROF) at a cost of $150 per ton. ROF is the only state permitted composting facility within 100 miles of campus. The university continues to produce 600 tons of food waste for composting. A University Compost Facility at Kentland would provide composting of, not only dining hall waste, but also other campus organic wastes from athletics, the College of Veterinary, residence halls, and campus landscaping, and potentially local jurisdictions. The capital cost of the facility is estimated at $1.4 -$1.8 million with net operating cost of $165,000 per year.

d. Engage faculty, students, and staff in Campus Climate Action Living Laboratory to promote Pollution Prevention (P2) concepts of reduce/reuse/recycle to achieve principles of Circular Economy. Include P2 and Circular Economy activities in Sustainability Internships, learning living centers, student orientation programs, and recycling/composting programs.

e. Promote awareness of recycling/compost behavior through marketing, social media, incentives, and innovative approaches. Include CAC sustainable choices pathways including web-based and smart-phone apps, student clubs, roundtables, 1st year experience app, and campaigns for Y-toss, green tailgating, and related programs.

f. Evaluate and improve as needed management of specialty wastes, such as e-waste, laboratory waste, construction debris, and wastes from major sporting and other events.
  ● By 2021, pilot a campus-wide Green Lab program to better design and manage waste materials in research labs, with an ultimate goal of Green Lab certification of 80% of VT science and engineering labs.
  ● Expand programs for reuse of materials, such as Surplus, Hokie-Swap, Y-Toss
  ● Expand programs for Green Tailgating and related Athletics recycling/compost initiatives
2020 VT CAC GOAL #8. Implement and Evaluate the Procurement Department’s Sustainable Procurement Policy 2020-2022

In April 2020, the Virginia Tech Procurement Department developed a Sustainable Procurement Policy that aims “to make procurement decisions that embody the university’s commitment to sustainability whenever possible.” The purpose of the Virginia Tech Sustainable Procurement Policy is to complement and strengthen our commitment to sustainability to include: identifying those sustainability factors that shall be incorporated into procurement decisions; encouraging vendors to promote products and services that they offer which are most suited to the university’s sustainability principles; and reducing the environmental impacts of materials acquired.

The Policy reflected the elements of the 2009/2013 VT Climate Action Commitment and Sustainability Plan. This Policy is a significant development for Virginia Tech in procurement to reflect sustainability principles in all aspects of materials and equipment acquisition and contracting. Because the 2009/2013 CAC and plan will be superseded by the 2020 VT CAC, we recommend the new Policy be piloted for two years and then be evaluated by the Procurement Department in collaboration with the Energy & Sustainability Committee in 2022 for its conformance with the adopted 2020 VT CAC.

Pathway to goal:

a. On a pilot basis, the Procurement Department will implement and evaluate the 2020 Sustainable Procurement Policy for two years

b. By 2022, based on the evaluation, the Procurement Department, in collaboration with the Energy & Sustainability Committee, will assess the pilot project and formulate the Sustainable Procurement Policy v.2.

Four Immediate projects/initiatives 2020-2022. The Waste/Recycling/Composting and Procurement subcommittee identified four projects/initiatives below for immediate action in the next two years to demonstrate the university’s commitment to climate action.

- Secure Funding and Develop University Compost Facility at Kentland
- Contract Zero Waste Consultant to conduct VT Waste Audit
- Implement and Evaluate Sustainable Procurement Policy 2020-2022
- Implement Campuswide Green Lab Program
Virginia Tech 2020 Climate Action Commitment
Working Group

Final Technical Report

Appendix B:

- Dwayne Pinkney Charge Letter to VT Climate Action Working Group
- VT 2020 CAC Working Group Members
- VT 2020 CAC Working Group Subcommittee Members
- Glossary
- VT Climate Justice Demands, December 2019
- VT Faculty Senate Climate Action Resolution, October 2019
MEMORANDUM

TO: John Randolph
    Todd Schenk
    Timothy Baird
    Brooke Baugher
    Shannon Bell
    Blake Bensman
    Dushan Boroyevich
    Angie De Soto
    Carol Davis
    Brogan Dineen
    Rob Glenn
    Drew Harris

    Erin Hopkins
    Chris Kiwus
    Natalie Koppier
    Kray Luxbacher
    Sean McGinnis
    Phil Miskovic
    Annie Pearce
    Anthony Purcell
    Helen Salko
    Peter Sforza
    Shayla Utzinger
    Gustavo Ventura Gargioni

FROM: Dwayne Pinkney

DATE: December 10, 2019

SUBJECT: Climate Action Commitment Working Group Charge

In light of the increasing sense of urgency surrounding climate change, the President has asked me to assemble an ad hoc working group to review the university community's progress on sustainability and to propose an update to the Virginia Tech Climate Action Commitment (President's Policy Memorandum 262). This memorandum requests your participation in the CAC Working Group. Much good work on sustainability has already occurred, and it is essential that we continue to build on this momentum and draw on the expertise of our faculty who are engaged in these important fields to remain a leader.

Charge
The CAC Working Group should provide two deliverables: 1) a summary of the university's progress on sustainability since the university's first Climate Action Commitment was put in place in 2009 and revised in 2013 and 2) a proposed update to the Climate Action Commitment.

The summary should:
- outline the structure, partnerships, and arrangements that have developed over time to address sustainability;
- include high level data summarizing the institution's progress since 2009; and
- provide perspective on how these achievements compare to those at peer institutions.
The revised Commitment should:

- consider whether updates to the definition, vision, and mission statements are needed;
- outline clear, measurable, and realistic goals;
- consider the long-term impact of the goals on policies, operations, and budget of the university;
- identify broad metrics and elements for determining progress in meeting these goals; and
- follow university policy format.

**Membership and Information Flow**

John Randolph will Chair the Working Group and Todd Schenk will serve as Vice Chair. To supplement the expertise of the Working Group membership, the Chair should invite other faculty, staff, and/or external resources to inform the Group’s work. The Chair may also establish subcommittees as needed to provide additional community perspectives.

Student representatives on the Working Group are also encouraged to assemble a larger advisory group or to use existing mechanisms such as SGA, GSA, and student organizations to provide information, concerns, and questions to the Working Group.

The university's existing governance process includes an Energy and Sustainability Committee. This committee is comprised of subject matter experts and sustainability practitioners from across the institution, as well as broad representation from faculty, staff, and students. It is essential that both this committee and the university administration have opportunities to share developments that may impact the Working Group's efforts and to ensure that many perspectives are considered. Therefore, I am requesting that regular updates be provided by the Working Group Chair or a designee to me and to the Energy and Sustainability Committee as the team's work progresses.

**Timeline for Reporting and Revised Commitment Approval**

The President has asked that the Committee to complete its work this academic year so that governance approvals can take place during fall 2020 in accordance with the below timeline:

- **December 2019:** Working Group formed and charged
- **March 1, 2020:** Interim report provided to me on your progress
- **May 7, 2020:** Final reports and recommendations provided to me
- **September 2020:** Presentations to the Energy & Sustainability Committee and the Commission on University Support
- **October 2020:** Presentation to University Council
- **November 2020:** Presentation to the Board of Visitors

Thank you, in advance, for your willingness to take on this challenge and bring your ideas and insight to this critical issue. I look forward to receiving regular updates on the team’s work and to submitting an updated commitment for University Council and the President’s consideration that provides meaningful and realistic goals for enhancing our work and producing enduring results.
Virginia Tech 2020 Climate Action Commitment Working Group

FACULTY (10)
• John Randolph, Chair, professor emeritus, UAP
• Todd Schenk, Vice-Chair, assistant professor, UAP
• Tim Baird, associate professor, Geography
• Shannon Bell, associate professor, Sociology
• Erin Hopkins, assistant professor of AHRM,, and faculty representative to the E&SC.
• Chen-Ching Liu, AEP Professor, ECE
• Kray Luxbacher, C.T. Holland professor and assoc. head, MME
• Sean McGinnis, associate professor, MSE and director, Green Engineering Program
• Annie Pearce, associate professor, BC
• Peter Sforza, director, Center for Geospatial Information Technology

STUDENTS (10)
• Brooke Baugher, graduate student, former grad assistant in the Office of Sustainability
• Brandon Burkey, graduate student representative to the E&SC.
• Gustavo Ventura Gargioni, graduate student representative to the E&SC (withdrew)
• Jack Leff, graduate student representative, GSA at-large
• Phil Miskovic, graduate student representative to the Com. on University Support
• Brogan Dineen, undergraduate student representative to the E&SC.
• Drew Harris, undergraduate student and worker in the Energy Manager’s Office.
• Natalie Koppier, undergraduate student representative to the E&SC.
• Jayme Bibbins, undergraduate, SGA at-large
• Owen Callahan, undergraduate, at-large

STAFF (4 non-voting)
• Blake Bensman, sustainability manager, Dining Services and Housing/Residence Life.
• Christopher Kiwus, associate VP chief facilities officer and ex officio E&SC, CUS
• Rob Glenn, director of Virginia Tech Electric Services and facilities representative to E&SC
• Brandon Hendricks, assistant director for Dining Services.

COMMUNITY (2 non-voting)
• Carol Davis, Town of Blacksburg representative.
• Shayla Utzinger, Blacksburg High School liaison
VT CAC 2020 Working Group Subcommittees (+convener, *WG member))

- **Community Engagement Subcommittee (VT CAC #10):**
campus involvement during Working Group process (involving stakeholders) and post-WG implementation (engaging campus participants)
  - Todd Schenk*#
  - Carol Davis#
  - Emily Satterwhite (Appal Studies)
  - Aparna Cheran# (undergrad, Microbio)
  - Rachel Spector# (undergrad, EnvCons&Soc)
  - Heidi Hahn# (undergrad, EPP)
  - Bryan Hanson (grad school ombudsperson)
  - Alexa Briehl (Dir. Comm. Business Affairs)
  - Sarah Collings Myers" (Comm. Facilities)

- **Climate Justice Subcommittee (VT CAC #10):**
opportunity for student advocates to contribute to and monitor WG
  - Shannon Bell*#
  - Carl Zipper# (CSES retired)
  - Jack Leff* (grad, STS)
  - Ryan Berotti (undergrad, ME)
  - Rachel Spector (undergrad, EnvCons&Soc)
  - Heidi Hahn# (undergrad, EPP)
  - Owen Callahan (undergrad, Psych)
  - Aparna Cheran# (undergrad, Microbio)
  - John Shewchuck# (undergrad, ME)
  - Amber Wendler# (grad, Bio)
  - Erin Nuckols (grad, EDP)
  - Jason Chavez (grad, PoliSci)
  - Shayla Uitzinger*# (BHS student)

- **Renewable Energy Opportunities Subcommittee (VT CAC #7):**
faculty/students/staff review renewable energy options including solar, biomass, wind on campus and off-campus VT properties and other sites, and potential partnerships for development.
  - Rob Glenn*#
  - Sean McGinnis#
  - Ron Meyers# (Research Tech, UAP)
  - John Randolph*#
  - Chen-Ching Liu# (ECE)
  - John Chermak# (GeolSci)
  - Kim Briele# (Dir, EngAssess)
  - Mary-Ann Ibeziako (Utilities)
  - Rachel Spector# (undergrad, EnvCons&Soc)
  - Heidi Hahn# (undergrad, EPP)
  - Paul O’Horo# (undergrad, ECE)
  - Nathan Hearne# (undergrad)

- **Peer University Comparison Subcommittee (VT CAC #1):**
faculty/students/staff review climate action among peer universities (e.g., in Virginia, ACC, Land Grant institutions) compared to VT:
  - John Randolph*#
  - Justin Noble (Dir. Internal Audit) or rep
  - Kray Luxbacher (Mining and Minerals) #
  - Ryan Berotti* (undergrad, ME)

- **GHG Inventory Subcommittee (VT CAC #3, 13):**
faculty/students/staff review our current practice of monitoring carbon emissions and progress toward our goals.
  - Sean McGinnis*# (MSE)
  - Drew Harris*# (undergrad, ME)
  - John Randolph*
  - Kray Luxbacher* (Mining and Minerals)
  - Rob Lowe# (EnvHealthSafety)
  - Mary-Ann Ibeziako" (Utilities)
  - Gustavo Gargioni*# (grad, AeroEng)
  - Jack Leff*# (grad, STS)
  - Natalie Koppier*# (undergrad, EPP)
  - Owen Callahan# (undergrad, Psych)
  - Conor Doane# (undergrad, CEE)
  - Marc Stern (FREC)"

- **Energy Opportunities Subcommittee (VT CAC #4, 7):**
faculty/students/staff review progress and potential for energy-related issues (electricity efficiency, steam plant, chillers, efficiency and demand reductions, 5-year energy management plan)
  - John Randolph*#+
  - Rob Glenn*# (Dir, VTES)
  - Amanda Morris# (Chem)
  - John Beach# (Dir, Utilities)
  - Kim Briele# (Dir, EngAssess)
  - Mary-Ann Ibeziako (Utilities)
  - Lowell Jesse" (EnergyEng, Facilities)
  - Gaurav Anand# (undergrad, ChemEng)
  - John Shewchuck# (undergrad, ME)
  - Ryan Berotti# (undergrad, ME)
- **Buildings Opportunities Subcommittee (VT CAC #6, 7):** faculty/students/staff review progress and potential for energy efficiency of new and existing buildings (design guidelines, 5-year energy management plan)
  - Scott Kerklo# (Facilities Eng Ops)
  - Erin Hopkins*# (AHRM)
  - Georg Reichard# (BC)
  - Anamaria Bukvic# (Geog)
  - Julia Gohlke# (Vet Med)
  - Mike Vellines (Const Stds, Facilities)
  - Paul Ely (Capital Const/Renovations)
  - Kim Briele (Eng.Assess.)
  - Emma Lineberry” (undergrad, Arch)
  - Christine Labuski (Soc)
  - Catie Grayson (undergrad, EPP)
  - Erin Nuckols (grad, EDP)
  - Yasmine Sikder (undergrad, ISE)

- **Transportation Opportunities Subcommittee (VT CAC #11):** faculty/students/staff review transportation progress and potential emission reduction (commuting, motor pool, other travel including university business air travel)
  - Nick Quint (Trans. Network Manager)#+
  - Brandon Burkey* (undergrad, Phil)
  - Greg Tew# (Arch)
  - Durelle Scott# (BSE)
  - Janet Rankin# (HNHE, ret)
  - Erik Olsen or Tom Fox (Blacksburg Transit)
  - Kali Casper (Town of Blacksburg planner)
  - Beth Lohman (Blacksburg GW/BW/SW Corridor)
  - Mike Dunn (Trans.Eng. Univ. Planning)
  - Amber Wendler# (grad, Bio)
  - Jordan Torregrosa# (undergrad, ME)
  - Lydia Patton# (Philosophy)

- **Budget and Finance Subcommittee (VT CAC #14):** faculty/students/staff review potential budget and finance mechanisms to achieve prospective VT CAC goals.
  - Nancy McGehee# (Hospitality/Tour. Mngmt)
  - Tim Hodge# (AVP Budget & Finance)
  - Debbie Greer” (SrDir Finance, SVPCEO)
  - Jim Hillman” (Dir. Facilities Finance)
  - Nate Smith# (undergrad, ISE)
  - Development person?

- **Agriculture/Forestry GHG Subcommittee:*** faculty/students/staff investigate net emissions from VT NRV land use/ag operations not included in original VT CAC as well as opportunities for emissions reduction and waste digestion/composting.
  - Patrick Hilt#+ (CALS operations)
  - Greg Evanylo # (CSES)
  - Jody Booze-Daniels# (CALS)
  - John Seiler# (FREC)
  - Peter Sforza* (CGIT)
  - Jack Rosenberger” (Campus Landscape Arch)
  - Tessa Hawley (undergrad, AAEC)
  - Nick Copeland
  - David Haak
  - Nathan King
  - Kathlyn Lewis
  - Adam Taylor

- **Waste/Recycling/Composting and Procurement Subcommittee (VT CAC #8, 9):** faculty/students/staff review progress and opportunities.
  - Blake Bensman*# (Sust.Man. Dning/Housing)
  - Brandon Hendricks# (AssocDir, Dining)
  - Annie Pearce#* (BC)
  - Greg Evanylo# (CSES)
  - Jody Booze-Daniels# (CALS)
  - Rob Lowe# (EnvHeathSafety)
  - Denny Cochrane# (Sust.Manager)
  - Reed Nagel# (Procurement)
  - Casey Underwood” (Athletics)
  - Jennifer Russel” (Sust.Biomaterials)
  - Greg Canaday” (Bldgs & Grnds)
  - Alan Cummins” (ExDir, MRSWA)
  - Teresa Sweeney” (MRSWA)
  - Amy Klinger# (undergrad, Biochem)”
  - Patrick Hilt
  - Anthony Purcell

- **Structuring Sustainable Choices Subcommittee (Serve as a support to other subcommittees in tackling institutional behavior):**
  - Todd Schenk# (UAP)
  - Alexandra Kahl# (MURP)
  - Drew Harris # (undergrad)
  - Blake Bensman# (SustMan. Dning/Housing)
  - Jack Leff # (grad, STS)
  - Christine Labuski # (Soc)
Glossary—VT CAC

100% renewable electricity: Relying on renewable energy production and/or RECs for all electricity

Behind the meter: Electricity activity (generation, demand response, efficiency) on the customer’s side of the meter

Bundled RECs: RECs plus electricity

Carbon credits: Same as carbon offsets

Carbon neutral: Net zero carbon emissions = 0 = emissions – credits/offsets

Carbon offsets: Certificate representing the reduction of one metric ton of CO2 that can be bought to credit against CO2 emissions

Carbon sequestration: Proposals for removing CO2 from the atmosphere, or for preventing CO2 from fossil fuel combustion from reaching the atmosphere

Climate justice: The recognition that climate change is not just an environmental problem but also an ethical issue, as the nations and people who will suffer the greatest consequences of climate change also tend to carry the least responsibility for causing the climate crisis.

Demand response: Reduction of electricity power demand during peak use periods by user or utility

E-waste: Electronic waste and universal “do-not-landfill” waste

Fossil fuel free: eliminate reliance on fossil fuels

Frontline communities/groups: Historically marginalized groups that are disproportionately burdened with the negative consequences of both climate change and the mitigation and adaptation efforts taken to address the climate crisis.

GHG emissions: for the VT 2020 CAC, GHG emissions include CO2, CH4, and N2O by VT operations at Blacksburg campus based on geographic and GHG scope of 2020 CAC. The geographic scope includes all Virginia Tech owned lands and buildings on the main campus, all buildings leased by university departments in Blacksburg, and agricultural/forestry operations and lands in the Blacksburg region. The GHG scope includes Scope 1 (emissions from campus fuel use and fugitive sources), Scope 2 (emissions related to purchased electricity (generation CO2 and N2O, transmission/distribution losses), and Some Scope 3 emissions related to campus behavior (commute driving, transit bus fuel, waste/recycling/compost, water/wastewater, aviation fuel, and commercial business travel).

Green Labs: sustainability program for research labs that spans energy, water, waste, procurement, and user behavior

Net metering: Producer customer (e.g. solar rooftop) relies on grid when needed and excess produced power is sent to the grid and customer pays for only net power from grid

Recycle rate: basic recycling rate = Primary Recycled Materials (PRM)/( PRM + MSW disposed); adjusted recycling rate adds credits to PRM for SW reused and Non-MSW recycled

Renewable energy credits (RECs): Renewable value associated with renewable energy production that can be separated from the energy and sold separately to buyers wishing to increase renewables reliance

RECs additionality: RECs that fund new renewable energy projects

Smart Grid: an electricity network based on digital technology that is used to supply electricity to consumers via two-way digital communication

Sustainable food: Less dependent on red meat and pork and more dependent on poultry, vegetables, grains, nuts

Zero net energy: Super-efficient building with net metered solar rooftop to provide the difference so zero annual net energy from utility

Zero waste campus: campus with a waste diversion rate (waste kept out of landfill) of 90% or more
Virginia Tech for Climate Justice
Demands
Updated 12/17/19

Virginia Tech has a responsibility to the students and the planet to claim our role as a courageous leader for climate justice. We urge Virginia Tech to live up to its reputation as an innovator in the development of tomorrow’s technology and to its motto *Ut Prosim* (that I may serve) by establishing strict guidelines and timelines to reduce the university’s contribution to climate catastrophe.

The following demands align with the Beyond Boundaries vision, including its *Tech for Humanity* initiative, which calls for technology innovation to be guided by values such as equity, ethics, and sustainability.

We Demand:

1. That President Sands make a public statement acknowledging that we are in a climate emergency and that, accordingly, he will advocate for immediate action. This statement will include a denunciation of the Mountain Valley Pipeline, which has already damaged the region’s ecologies and, if completed, would emit twice as much greenhouse gas (GHG) as all fixed sources of emissions in Virginia.


2. That the Virginia Tech Foundation divest from all publicly-traded companies that hold coal, oil, or gas reserves and intend to use or sell them for the purpose of combustion, from all pipelines or other fossil-fuel-related enterprises, and from all financial products that include such companies.

   (UPDATE 11/6/19: John Dooley will take our request to the Foundation's January 2020 meeting.)

3. That the university mandate a cap on greenhouse gas (GHG) emissions across all VT facilities, including upstream emissions from energy sources like natural gas. That Virginia Tech’s total energy consumption, including with the campus expansion envisioned in the 2047 Master Plan, be capped below the current energy intensity levels, and that the Climate Action Commitment include an annual rate of energy reduction informed by leading peer institutions like UNC Chapel Hill and ongoing UN Climate Action Summits. That Virginia Tech’s electric and heating supply to all VT facilities be generated from 100% renewable sources by 2030. That Virginia Tech Electric Service, which serves the Blacksburg campus and 6,000 residential and commercial customers in Blacksburg, provide 100% of its electric supply from renewable sources by 2030. That these transitions be guided by principles of energy democracy, which align
with the “Tech for Humanity” Initiative, and climate justice locally and globally. That once these commitments are in place, President Sands sign on to the SDG Global Climate Emergency letter. (UPDATED 11/8/19)

4. That Virginia Tech enact comprehensive energy efficiency programming at existing and planned campus facilities informed by strategies from the U.S. Department of Energy’s 2018 Zero Energy University Campuses Progress Update; formalize a commitment to prioritize the renovation of existing buildings before demolition and new construction; ensure all new construction meet net-zero energy ready standards by achieving a source energy use intensity (EUI) of 75 kBTU/ft²yr or less in third party energy simulations with verification through post-occupancy evaluations. (UPDATED 11/8/19).

5. That Virginia Tech appoint student representatives—selected by well-informed members of established student-led environmental organizations—as voting members on all bodies that make decisions concerning energy use, the Climate Action Commitment, and issues with climate justice implications.

6. That Virginia Tech initiate a comprehensive research initiative focused on distributed renewable energy development and energy efficiency. That Virginia Tech expand funding for Cooperative Extension to include community training programs and resources for weatherization, energy efficiency, and renewable energy creation in homes and small businesses throughout Southwest Virginia. That such programs be guided by principles of energy democracy and climate justice locally and globally. (UPDATED 11/8/19)
Whereas opinions among faculty senators—and Virginia Tech faculty in general—vary, but there is broad consensus, based on extensive, independent, scientific studies, that climate change poses an existential threat, and that we have a narrowing window of time to curb greenhouse gas emissions in order to avoid devastating increases in the global temperature and acidification of ocean waters.

Whereas Virginia Tech is responsible for significant greenhouse gas emissions and other environmental impacts, and thus has a moral responsibility to act sustainably, including reducing our emissions;

Whereas Virginia Tech students, staff and faculty are calling for action to address climate change and improve upon our environmental footprint in other areas;

Whereas from renewable energy to electric cars, sustainable farming to environmental policy, we are proud of the research our faculty and students are doing to address climate change and other environmental problems;

Whereas the climate crisis is a global issue and taking leadership through action serves Virginia Tech’s goal of setting an example and leading innovation as a global land-grant university;

Whereas there are myriad opportunities for virtually all Virginia Tech programs to contribute meaningfully to the development and support of the technologies, policies and socio-cultural shifts necessary to tackle climate change and other environmental problems;

Be it resolved that the Virginia Tech Faculty Senate calls upon the university administration to move swiftly to make a more serious commitment to address our greenhouse gas emissions and to advance environmental stewardship in general;

Be it further resolved that as part of this commitment we ask the administration to engage the wider community in a process of updating and then implementing our greenhouse gas and other environmental commitments;

Be it further resolved that we call for this commitment to include a comprehensive review of Virginia Tech’s direct and indirect carbon footprint, and the development and implementation of a plan to significantly reduce our greenhouse gas emissions on a timescale that reflects the urgency of this issue;

Be it further resolved that we call for this plan to include a roadmap that will lead us to 100% renewable energy usage for our electricity, heating, and transportation services by 2025;

Be it further resolved that we call for this plan to include improvements to our purchasing and waste management practices to both reduce greenhouse gas emissions and lessen our impacts on the environment;

Be it further resolved that we call for this plan to include meaningful and substantial increases in energy efficiency achieved by making it a rigorous and mandatory consideration in all major construction and renovation projects on campus, as well as through a separate program to review and improve energy efficiency in existing buildings and infrastructure;

Be it further resolved that the faculty senate calls on the university to provide greater support for research, teaching and outreach activities that facilitate action to address climate change and other environmental issues;

Be it further resolved that the faculty senate calls upon the Virginia Tech Foundation to find ways to use the endowment to make investments that support and encourage firms to make the changes needed to avert a climate-change disaster in the coming years and advance environmental stewardship.
**Open Session Agenda**

**FINANCE AND RESOURCE MANAGEMENT COMMITTEE**

**Latham A/B, The Inn at Virginia Tech**

**3:15 p.m.**

**March 21, 2021**

<table>
<thead>
<tr>
<th><strong>Agenda Item</strong></th>
<th><strong>Reporting Responsibility</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Welcome and Opening Remarks</td>
<td>Ed Baine</td>
</tr>
<tr>
<td>2. Consent Agenda</td>
<td>Ed Baine</td>
</tr>
<tr>
<td>a. Approval of Minutes of the November 16, 2020 Meeting</td>
<td></td>
</tr>
<tr>
<td>b. Update on University Debt Restructuring Initiatives</td>
<td></td>
</tr>
<tr>
<td>3. Update on Advancement</td>
<td>Charlie Phlegar</td>
</tr>
<tr>
<td>4. Update on University Cost Efficiencies</td>
<td>Dwayne Pinkney</td>
</tr>
<tr>
<td>5. Report on Actions Taken Under the Delegation of Authority and Policy 4240</td>
<td>Ken Miller</td>
</tr>
<tr>
<td>and the Corresponding Financial and Programmatic Impacts</td>
<td>Bryan Garey</td>
</tr>
<tr>
<td>* 6. Approval of Financial Plan to Close the Budget Gap Caused by the</td>
<td>Ken Miller</td>
</tr>
<tr>
<td>COVID-19 Pandemic</td>
<td></td>
</tr>
<tr>
<td>* 7. Resolution for Approval of Transportation Services Fee Refund for</td>
<td>Ken Miller</td>
</tr>
<tr>
<td>Spring 2021</td>
<td></td>
</tr>
<tr>
<td>◆ 8. Resolution for Approval of Tuition and Fee Rates for 2021-22</td>
<td>Dwayne Pinkney</td>
</tr>
<tr>
<td>a. Budget Development Overview</td>
<td>Ken Miller</td>
</tr>
<tr>
<td>b. Proposed Tuition and Fee Rates</td>
<td></td>
</tr>
<tr>
<td>* 9. Approval of 2021-22 Compensation for Graduate Assistants</td>
<td>Ken Miller</td>
</tr>
<tr>
<td>Tim Hodge</td>
<td></td>
</tr>
<tr>
<td>10. University's Annual Financial Statements</td>
<td>Ken Miller</td>
</tr>
<tr>
<td>11. Intercollegiate Athletics Programs Report for Year Ended June 30, 2020</td>
<td>Ken Miller</td>
</tr>
<tr>
<td>* 12. Approval of Year-to-Date Financial Performance Report (July 1, 2020</td>
<td>Tim Hodge</td>
</tr>
<tr>
<td>– December 31, 2020)</td>
<td>Bob Broyden</td>
</tr>
<tr>
<td>13. Discussion of Future Agenda Topics and Closing Remarks</td>
<td>Ed Baine</td>
</tr>
</tbody>
</table>

* Requires full Board approval.
◆ Discusses Enterprise Risk Management topic(s).
Briefing Report

FINANCE AND RESOURCE MANAGEMENT COMMITTEE

March 21, 2021

Open Session

1. Welcome and Opening Remarks

2. Consent Agenda: The Committee will consider for approval and acceptance the items listed on the Consent Agenda.
   
   a. Approval of Minutes of the November 16, 2020 Meeting: The Committee will review and approve the minutes of the November 16, 2020 meeting.
   
   b. Update on University Debt Restructuring Initiatives: The Committee will receive an update on the university’s debt restructuring initiatives.

3. Update on Advancement: University Advancement will provide a quarterly report on their fundraising efforts including an update on fundraising in fiscal year 2021, a giving day update, a campaign update, an overview of the strategies for meeting the 22 percent participation rate by 2022 goal, and the outlook for fundraising.

4. Update on University Cost Efficiencies: The Committee will receive an update on university cost efficiencies. This update provides an analysis of the university’s cost structure as compared to peer institutions across several established cost benchmarks and highlights recent university efficiency initiatives.


6. Approval of Financial Plan to Close the Budget Gap Caused by the COVID-19 Pandemic: The Committee will review for approval a financial plan to close the budget gap caused by the COVID-19 pandemic. This financial plan will close the $60.6 million operating gap identified and reported at the November 2020 Board of Visitors meeting, plus additional financial impacts of $2.6 million identified after the November 2020 Board meeting. The financial plan also includes an overview on the temporary authority granted by the commonwealth to mitigate the financial impacts of the pandemic and a summary of the key financial ratios the Auditor of Public

* Requires full Board approval.
◆ Discusses Enterprise Risk Management topic(s).
Accounts (APA) uses to determine the financial health of state institutions of higher education.

7. **Resolution for Approval of Transportation Services Fee Refund for Spring 2021:** The Committee will review for approval a resolution authorizing refunding of the 2021 Spring semester Transportation Services Fee to reflect the cost reduction from the Town of Blacksburg transit contract made possible by federal Coronavirus Aid, Relief, and Economic Security (CARES) Act support for transit service received by the town.

8. **Resolution for Approval of Tuition and Fee Rates for 2021-22:** The Committee will review for approval the proposed tuition and fee rates for 2021-22. The 2004 General Assembly authorized “The Board of Visitors . . . of institutions of higher education may set tuition and fee charges at levels they deem to be appropriate for all resident student groups based on, but not limited to, competitive market rates…” For 2021-22, the university proposes a 2.9 percent increase in tuition and mandatory educational and general (E&G) fee rates, reduced to a 2.1 percent increase with one-time relief provided by the state for in-state and out-of-state undergraduate students and graduate students, and for Virginia Tech Carilion School of Medicine students.

Consistent with this, the package proposes an increase of $238 to a total tuition and mandatory E&G fee rate of $11,658 for in-state undergraduate students and an increase of $624 to a total tuition and mandatory E&G fee rate of $30,584 for out-of-state undergraduate students.

For on-campus graduate students, this package proposes to increase tuition and mandatory E&G fees by $285 to a total rate of $13,986 for in-state students, and by $575 to a total rate of $28,189 for out-of-state students. For students of off-campus graduate programs, this package proposes to increase tuition and mandatory E&G fees by $316 to a total rate of $15,483 for in-state students, and by $615 to a total rate of $30,174 for out-of-state students.

For Virginia Tech Carilion School of Medicine Students, the university proposes an increase of $1,106 to a total tuition and mandatory E&G fee rate of $54,219.

Additionally, this package proposes to increase the tuition and mandatory E&G fees for Virginia/Maryland Veterinary Medicine students by $556 or 2.5 percent, reduced to a net increase of $399 or 1.8 percent with one-time relief, to a total tuition and mandatory E&G fee rate of $22,305. For out-of-state, non-Maryland students, the package proposes to increase the tuition and mandatory E&G fees by $1,024 or 2.0 percent, reduced to a net increase of $735 or 1.5 percent with one-time relief, to a total tuition and mandatory E&G fee rate of $51,170.

The university recommends an increase of $90 or 4.2 percent to total comprehensive fees for a total of $2,244 for in-state and out-of-state undergraduate and graduate students. An average

* Requires full Board approval.
◆ Discusses Enterprise Risk Management topic(s).
1.9 percent increase in room and board on the Blacksburg campus (2.2 percent average, including the Northern Virginia Gallery) is recommended.

9. **Approval of 2021-22 Compensation for Graduate Assistants:** The Committee will review and take action on the proposed 2021-22 schedule of stipends and support for the health insurance program for graduate students. To be competitive in the recruitment and retention of high-quality graduate students, it is important for the university to provide compensation packages that are comparable with those offered by peer institutions. Stipends proposed for 2021-22 are consistent with the 5.0 percent increase in state approved employee compensation plan. The key components of the graduate student compensation package include competitive stipends, tuition assistance, and health insurance.

10. **University’s Annual Financial Statements:** The Committee will receive an overview of the university’s annual financial statements for the fiscal year ending June 30, 2020.

The financial statements have been prepared in accordance with generally accepted accounting principles, and the Auditor of Public Accounts (APA) issued an unmodified (or clean) opinion. The APA reported three written audit comments for improving the timeliness of enrollment data to the National Student Loan Data System, strengthening the review process for preparation of the Schedule of Expenditures of Federal Awards, and improving the timeliness of grant closeout. The university is in the process of implementing corrective action plans to address these audit comments.

At June 30, 2020, the university had total net position of approximately $1.5 billion, an increase of $123.7 million or 8.9 percent since fiscal year 2019. Total unrestricted net assets increased by $15.2 million or 10.1 percent to negative $135.5 million.

Total revenues for fiscal year 2020 were $1.7 billion, an increase of $72.3 million or 4.5 percent over fiscal year 2019. This increase was due to student population growth, an increase in state appropriations, and an increase in capital grants and gifts.

Total operating expenses for fiscal year 2020 were $1.6 billion, an increase of $81.8 million or 5.6 percent. The increase was primarily in the compensation and benefits category and the scholarships and fellowships category, mainly due to emergency hardship support for students using the Coronavirus Aid, Relief, and Economic Security (CARES) Act funding. Increases in these areas were partially offset by savings in the supplies and materials and travel categories due to spending and travel restrictions in the latter portion of the year.

11. **Intercollegiate Athletics Programs Report for Year Ended June 30, 2020:** The Committee will receive a report on the Auditor of Public Accounts (APA) Intercollegiate Athletics Program review for fiscal year 2020. The APA performed certain agreed-upon procedures to evaluate
whether the Schedule of Revenues and Expenses of the Intercollegiate Athletics Program for fiscal year ended June 30, 2020, is in compliance with the National Collegiate Athletic Association (NCAA) bylaws. During the APA review, no matters were brought to the APA’s attention that would lead them to believe the amounts on the Schedule of Revenues and Expenses should be adjusted. This review does not constitute an audit and therefore no opinion is issued.

12. Approval of Year-to-Date Financial Performance Report (July 1, 2020 – December 31, 2020): The Committee will review for approval the Year-to-Date Financial Performance Report for July 1, 2020 – December 31, 2020. For the second quarter, budget adjustments were made to reflect revisions to projected revenues and expenditures. The University Division budget was increased by $5.7 million due to the Commonwealth of Virginia’s second Coronavirus Relief Funding, $4 million for additional General Fund support for COVID-19 impacts, and $1.5 million for the establishment of the Virginia Tech Animal Laboratory Services (ViTALS). The Auxiliary Enterprises continue to work through short-term and long-term budget impacts of the COVID-19 pandemic, with an additional revenue decrease of ($5.8 million) from the first quarter. Additionally, the Auxiliary Enterprise budget was increased for $7.6 million Coronavirus Relief Fund Allocation from the commonwealth.

The Auxiliary Enterprises are experiencing expense savings due to the essential spending order and decreased business volume. Additional adjustments are anticipated in the third quarter of fiscal year 2021 to further align the budget for additional financial impacts of the pandemic.

Through the quarter ending December 31, 2020, $40.2 million was expended for Educational and General capital projects, and $41.9 million was expended on Auxiliary Enterprises capital projects. Cumulative capital outlay expenditures through the quarter ending December 31, 2020 totaled $82.1 million.

13. Discussion of Future Agenda Topics and Closing Remarks: The Committee will discuss possible topics for future meetings and other topics as needed.
Closed/Open Session Agenda

FINANCE AND RESOURCE MANAGEMENT COMMITTEE

Solitude Room, The Inn at Virginia Tech

10:00 a.m.

March 22, 2021

<table>
<thead>
<tr>
<th>Agenda Item</th>
<th>Reporting Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Motion to Begin Closed Session</td>
<td>Preston White</td>
</tr>
<tr>
<td>* 2. Ratification of Personnel Changes Report</td>
<td>Ken Miller</td>
</tr>
<tr>
<td></td>
<td>Cyril Clarke</td>
</tr>
<tr>
<td>3. Motion for Open Session</td>
<td>Anna James</td>
</tr>
<tr>
<td>4. Approval of Items Discussed in Closed Session</td>
<td>Ed Baine</td>
</tr>
</tbody>
</table>

* Requires full Board approval.
♦ Discusses Enterprise Risk Management topic(s).
Closed Session

1. **Motion for Closed Session**: Motion to begin closed session.

* 2. **Ratification of Personnel Changes Report**: The Committee will review and ratify the quarterly Personnel Changes Report.

3. **Motion for Open Session**: Motion to begin open session.

4. **Approval of Items Discussed in Closed Session**: The Committee will review for approval the items discussed in closed session.

* Requires full Board approval.
Consent Agenda

a. Approval of Minutes of the November 16, 2020 Meeting
b. Update on University Debt Restructuring Initiatives

*Requires full Board approval*
Joint Closed Session with the Buildings and Grounds Committee
November 15, 2020

Board Members Present: Ed Baine, Shelley Barlow, Sharon Brickhouse Martin, Carrie Chenery, Greta Harris, C.T. Hill, Anna James, Eric Kaufman – Faculty Representative, Melissa Nelson, Camellia Pastore – Undergraduate Student Representative, Chris Petersen, Mehul Sanghani, Tamarah Smith – Staff Representative, Sabrina Sturgeon – Graduate Student Representative, Horacio Valeiras, Jeff Veatch (remote)

Virginia Tech Personnel: Mac Babb, Eric Brooks, Bob Broyden, Cyril Clarke, Al Cooper, Corey Earles, Kari Evans, Kevin Faust, Randal Fulhart, Bryan Garey, Mark Gess, Wendy Halsey, Kay Heidbreder, Mary-Ann Ibeziako, Frances Keene, Chris Kiwus, Sharon Kurek, Jamie Lau, Ken Miller, Liza Morris, Heidi Myers, Bob Muse, Justin Noble, Mark Owczarski, Kim O’Rourke, Dwayne Pinkney, Tim Sands, John Tarter, Dwyn Taylor, Jon Clark Teglas, Chris Yianilos, Tracy Vosburgh

* 1. Approval of Resolution for a Capital Lease for the 3200 Commerce Street Property: The Committees reviewed for approval a resolution for a capital lease for the 3200 Commerce Street property.

The university vision to expand research and development under the Virginia Tech Transportation Institute (VTTI) is a key strategic initiative for the future. The acquisition of 3.29 acres of property with 10,434 square feet of additional office and garage space at 3200 Commerce Street is an essential asset for growth by housing VTTI’s technical support operations and facilitate vehicle repairs and modifications, streamlining access to research vehicles, and promoting the expedient staging of research props and fixtures. This space also provides a conditioned area for sponsors and researchers to interact with vehicle systems and is a critical staging area for modified vehicles and equipment that are not fully weather rated.

The Virginia Tech Foundation (Foundation) acquired the property on behalf of the university for $1.52 million on May 29, 2020. The funding plan calls for the university to enter a lease with the Foundation at a rate sufficient to retire the acquisition costs, normal operating costs, and property carrying costs. VTTI will fund the lease costs from its returned overhead revenues. The University Controller’s Officer has reviewed the lease and determined that the terms and conditions meet the standard for a capital lease. Under the university’s management agreement for capital projects
with the commonwealth, capital leases are defined as capital projects that require a capital project authorization, irrespective of their total value. While the asset acquisition costs are below the commonwealth’s $3 million capital project threshold, the lease meets the Generally Accepted Accounting Principles (GAAP) for a capital lease.

The university and VTTI are ready to proceed with entering a lease with the Foundation and have developed an entirely nongeneral fund resource plan sufficient to cover the $1.52 million property acquisition costs, future property carrying, and maintenance costs.

This request is for authorization to move forward with a capital lease for the 3200 Commerce Street property.

The Committees recommended the Resolution for a Capital Lease for the 3200 Commerce Street Property to the full Board for approval.

* 2. Approval of Resolution to Supplement the New Upper Quad Residence Hall:
   The Committees reviewed for approval a resolution to supplement the New Upper Quad Residence Hall project.

   The Board of Visitors approved the New Upper Quad Residence Hall project at its June 3, 2019 meeting. This approved project includes a program of 300 beds and will be located on the corner of Stanger Street and Old Turner Street adjacent to the site for the New Corps Leadership and Military Sciences Building. The program bed count ensures housing capacity to support the enrollment growth plans for the Corps of Cadets to reach 1,400 students. The original project authorization includes a $33 million budget which is based on a university residential cost model of $110,000 per bed. The project scope includes razing Femoyer Hall and the design, construction, and furnishings for the new residential facility.

   Subcontractor pricing at the completion of preliminary designs (September 15, 2020) show the costs for the project are $133,000 per bed, or $40 million. The primary drivers that push the cost over $110,000 per bed are associated with the site, a necessary feature for the Corps of Cadets, including the complexity and extensiveness of utility relocations, volume of contaminated soils remediation and hazardous materials handling for the demolition of Femoyer Hall, extensive grade changes to address ADA compliance, and market pricing. The costs above reflect the acceptance of value engineering alternatives.

   The project includes the scope necessary to meet the needs of the Corps of Cadets, residential program, and campus requirements. The university reviewed the project
scope and established that the acceptance of any additional value engineering would be detrimental to the program requirements for the Corps of Cadets.

To ensure the project addresses its programmatic intent, the university is requesting a $7 million supplement authorization for the New Upper Quad Residence Hall project. The university has developed a financing plan to support the additional $7 million of costs necessary to complete the entire scope of work. The plan calls for the use of debt serviced from residential program auxiliary revenue. Any cash designated for the project accumulated prior to the issuance of permanent debt may be used directly for project costs and to lower the total debt issuance.

This request is for authorization move forward with a $7 million supplement to adjust the total project authorization for the New Upper Quad Residence Hall project to $40 million and to complete the project.

The Committees recommended the Resolution to Supplement the New Upper Quad Residence Hall to the full Board for approval.

There being no further business, the meeting adjourned at 4:43 p.m.

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**Joint Open Session with the Academic, Research, and Student Affairs Committee**

November 16, 2020

**Board Members Present:** Ed Baine, Shelley Barlow, Sharon Brickhouse Martin, Carrie Chenery, Greta Harris, C. T. Hill, Anna James, Eric Kaufman – Faculty Representative, Melissa Nelson, Camellia Pastore – Undergraduate Student Representative, Tamarah Smith – Staff Representative, Sabrina Sturgeon – Graduate Student Representative, Horacio Valeiras, Jeff Veatch (remote)

**Virginia Tech Personnel:** Callan Bartel, Eric Brooks, Cyril Clarke, Al Cooper (remote), Jack Finney, Bryan Garey, Kay Heidbreder, Nancy Meacham, Ken Miller, Kim O’Rourke, Dwayne Pinkney, Tim Sands, Dan Sui, Don Taylor

**Guests:** Henri Gendreau

♦ **1. Annual Report on Research:** The Committees received a comprehensive annual report on research highlighting university research expenditures and related trends and benchmarking information. This report also included an introduction of the new Vice President for Research and Innovation, Dr. Daniel Sui.
2. Critical Hiring and Compensation Exceptions First Quarter FY 2020-21: As a dimension of managing budget constraints, the university established a process for reviewing personnel actions. After review, only critical and essential hires and compensation actions are approved. The Committees reviewed personnel actions and data for the first quarter. While the commonwealth lifted restrictions on personnel actions in October 2020, the university maintains its review and approval processes.

* 3. Approval of Resolution Delegating Authority for the Personnel Changes Report: The Committees reviewed for approval the Resolution to Amend Delegation of Authority for Selected Faculty Personnel Actions. This resolution would allow the Board of Visitors to focus on high-level appointments and compensation; appointment and promotion of tenure-track or continued appointment-track faculty members who have permanent status with the institution; salary adjustments with more significant financial impact; deferred compensation; and appointment and compensation packages for athletic personnel.

The Committees recommended the Resolution Delegating Authority for the Personnel Changes Report to the full Board for approval.

Closed Session

**Board Members Present:** Ed Baine, Shelley Barlow, Sharon Brickhouse Martin, Anna James, Horacio Valeiras

**Virginia Tech Personnel:** Callan Bartel, Kay Heidbreder, Nancy Meacham, Ken Miller, Charles Phlegar, Dwayne Pinkney, Tim Sands

1. **Motion for Closed Session:** Motion to begin closed session.

* 2. **Ratification of Personnel Changes Report:** The Committee met in closed session to review and ratify the quarterly Personnel Changes Report.

The Committee recommended the Personnel Changes Report to the full Board for approval.

Open Session

**Board Members Present:** Ed Baine, Shelley Barlow, Sharon Brickhouse Martin, C.T. Hill, Anna James, Horacio Valeiras
Virginia Tech Personnel: Beth Armstrong, Callan Bartel, Eric Brooks, Bob Broyden, Al Cooper (remote), John Cusimano, Kay Heidbreder, Tim Hodge, Chris Kiwus, Nancy Meacham, Ken Miller, Charles Phlegar, Dwayne Pinkney, Tim Sands, Dwyn Taylor, Chris Yianilos

Guests: Henri Gendreau

1. Motion to Reconvene in Open Session: Motion to begin open session.

2. Opening Remarks

3. Consent Agenda: The Committee considered for approval and acceptance the items listed on the Consent Agenda.

   a. Approval of Items Discussed in Closed Session

   b. Approval of Minutes of the August 25, 2020 Meeting

   c. Annual Write-off of Delinquent Accounts: As of June 30, 2020, the amount of write-offs of delinquent accounts totaled $385,065 which represents 0.03 percent of the 2019 annual operating revenues of $1.16 billion. The current year write-off is consistent with the total write-off amounts in recent years.

   d. Approval of Pratt Fund Program and Expenditure Report: The Pratt Fund provides funding for programs in both the College of Engineering and Department of Animal Nutrition in the College of Agriculture and Life Sciences. For fiscal year 2019-20, the College of Engineering had total expenditures of $940,029 and the Animal Nutrition had total expenditures of $1,157,032.

   The Committee approved the items on the Consent Agenda and recommended the Pratt Fund Program and Expenditures Report to the full Board for approval.

4. Update on Advancement: University Advancement provided a quarterly report on their fundraising efforts including an update on the first months of fundraising in fiscal year 2021, a campaign update, an overview of the strategies for meeting the 22 percent participation rate by 2022 goal, and the outlook for fundraising.

5. Annual Report on Investments and Quasi-Endowments: The Committee received a report on university investments, investment performance and related benchmarks, estimated payouts for fiscal year 2021, and planned use of such funds. The university has two investment pools: a short to intermediate-term pool managed within the university and a long-term pool managed by the Virginia Tech Foundation, Inc. The report shows the purposeful growth of funds invested in the
endowment pool managed by the foundation, which consists of true endowments, quasi-endowments and nongeneral fund reserves and balances, and local funds owned by the university.

As of June 30, 2020, the market value of university funds invested in the short to intermediate-term pool was $376.5 million and in the foundation was $401.8 million. The short-term university investment income for fiscal year 2021 is estimated to be approximately $6 million and the long-term university investment income for fiscal year 2021 is estimated to be approximately $18.8 million. The university’s investment income is budgeted for restricted and unrestricted purposes to support scholarships, professorships, graduate student assistantships, auxiliary enterprises, and the Virginia Tech Carilion School of Medicine, one-time or limited recurring commitments for strategic institutional goals and initiatives, and building adequate operating reserves (including the strategic plan milestone of growing net assets by $20 million per year).

6. **Annual Report on the University's Financial Aid Resources:** The Committee received a comprehensive report on the university’s scholarship and financial aid program. In its Management Agreement with the commonwealth, the university affirmed its commitment to increase the support for student financial aid. The university continues to work proactively to ensure access and affordability. The amount of total student financial aid awarded increased from $511.9 million in fiscal year 2019 to $538.4 million in fiscal year 2020.

7. **Update on the Special Session of the General Assembly:** The Committee received an update on the Special Session of the General Assembly including a summary of major budget actions from the Reconvened Session and the Special Session and the next steps for finalizing the budget revisions.

*♦ 8. **Financial Update on COVID-19 and Approval of the 2020-21 Operating Budget Adjustment:** The Committee received an update on the financial impacts of the COVID-19 pandemic and reviewed for approval the 2020-21 Operating Budget Adjustment.

The preliminary 2020-21 Operating Budget was approved by the full Board at the June 2, 2020 meeting; however, adjustments are needed due to the impact of the outcome of the special legislative session and the confirmation of Fall 2020 enrollment levels on the current operational model. These adjustments include a $29 million increase in revenue and expenditure budgets for the Educational and General program, and a $77.4 million decrease in revenue and a $16.8 million decrease in expenses for a net decrease adjustment of $60.6 million for Auxiliary Enterprises.
In addition to the proposed budget adjustments, this update included an overview of the strategies that are being considered to manage the pandemic’s impact on the university’s finances.

The Committee recommended the 2020-21 operating budget adjustment to the full Board for approval.

* 9. Approval of 9(d) Debt Restructuring and Refunding Resolutions: The Committee reviewed for approval the proposed Virginia College Building Authority (VCBA) 9(d) Debt Restructuring Resolution and the Virginia Tech 9(d) Debt Restructuring and Refunding Resolution. As a result of the impact of COVID-19 on the university and its finances, the university is seeking approval to pursue the following restructuring and refunding initiatives.

a. VCBA 9(d) Debt Restructuring Resolution: Under the commonwealth’s initiative, the VCBA will restructure a portion of the university’s pooled VCBA bonds for debt service relief. The restructuring will result in having no principal payments in fiscal years 2022 and 2023. These deferred principal payments will be added to the end of the existing amortization schedules, thereby extending the final maturities by two years. The proposed VCBA resolution authorizes the university to participate in the restructuring program and to pledge the general revenues of the university to secure the debt.

b. Virginia Tech 9(d) Debt Restructuring and Refunding Resolution: Under the university’s initiative, athletic VCBA bonds will be restructured, and other VCBA, 9(c) general obligation, and university Series 2015 bonds will be reviewed for additional restructuring and refunding opportunities. The 9(d) bonds will be issued directly by the university. The proposed resolution authorizes the issuance of the university’s 9(d) bonds and pledges the general revenues of the university to secure the debt.

The Committee recommended the 9(d) Debt Restructuring and Refunding Resolutions to the full Board for approval.

10. Review and Acceptance of the Annual Report on University Debt Ratio and Debt Capacity: The Committee received for acceptance a report on the university’s debt ratio and debt capacity. At the conclusion of fiscal year 2019-20, outstanding long-term debt of the university totaled $452.8 million with a debt ratio of 3.51 percent. The university proposed the continuation of the five percent cap on the debt ratio for future years and the Committee affirmed its support for continuation of the five percent internal debt ratio target.
* 11. Approval of Year-to-Date Financial Performance Report (July 1, 2020 – September 30, 2020): The Committee reviewed for approval the Year-to-Date Financial Performance Report for July 1, 2020 – September 30, 2020. For the first quarter, budget adjustments were made to reflect revisions to projected revenues and expenditures. The tuition and fee budget was increased by $14.0 million for planned Fall 2020 enrollment growth and by $8.1 million for higher than projected Summer 2020 enrollment. The University Division revenue budget was updated to remove the $25 million revenue contingency established for potential impacts due to COVID-19. The corresponding expenditure budget increase includes the restoration of two percent of the preliminary expenditure budget reductions. A three percent budget reduction remains to manage cost escalation, unfunded mandates, the fall enrollment shortfall, and impacts of COVID-19. An additional two percent budget remains in non-college areas for critical needs. For the Cooperative Extension/Agriculture Experiment Station the five percent budget reductions were completely eliminated. Additional adjustments are anticipated in the second quarter of fiscal year 2021 to further align the budget for additional financial impacts of the pandemic.

For the quarter ending September 30, 2020, $22.5 million was expended for Educational and General capital projects, and $26.3 million was expended on Auxiliary Enterprises capital projects. Capital outlay expenditures for the quarter ending September 30, 2020 totaled $48.8 million.

The Committee recommended the Year-to-Date Financial Performance Report to the full Board for approval.

12. Discussion of Future Agenda Topics and Closing Remarks: The Committee discussed possible topics for future meetings and other topics as needed.

The Committee expressed appreciation for the good work of the finance team with their proactive planning and flexibility in response to these challenging times.

There being no further business, the meeting adjourned at 11:41 a.m.

* Requires full Board approval.
Debt Restructuring Initiatives

FINANCE AND RESOURCE MANAGEMENT COMMITTEE

March 04, 2021

COVID-19 has affected Virginia Tech significantly, and there is continued uncertainty regarding the virus’s future effects on the university and its finances. Over the past six months, the university has been restructuring and refunding its 9(c) Commonwealth General Obligation bonds, all Athletic Department bonds, and its 9(d) Virginia College Building Authority (VCBA) bonds to provide debt service relief and capture refinancing opportunities where available (see the attached summary).

Commonwealth 9(c) Debt

In November, the commonwealth refunded bonds for the university’s Ambler Johnston Hall project to provide debt service savings and defer principal payments until June 1, 2023. The taxable bonds had an average life of 6.9 years, an all-in cost of capital of 1.12 percent, and a present value from cash flows of $2.07 million net of expenses. This spring, after receiving the General Assembly’s approval to extend maturities, the commonwealth is expected to restructure and refund bonds for the university’s remaining 9(c) projects to defer principal payments until June 1, 2023. The deferred principal payments from fiscal year 2021 and fiscal year 2022 will be added to the end of each project’s existing amortization schedule, thereby extending the final maturity by two years. It is estimated that the bonds will produce a present value from cash flows of ($382,592) net of expenses.

Athletic 9(d) Debt

In January, the university consolidated and restructured all of Athletics’ long-term debt into a 20-year amortization that deferred all debt service payments until September 1, 2023 and extended the maturity to 2040. The taxable bonds had an average life of 11.6 years, an all-in cost of capital of 2.11 percent, and a present value from cash flows of ($200,310) net of expenses.

VCBA 9(d) Debt

In January, the commonwealth restructured and refunded debt for 19 university projects and deferred principal payments until September 1, 2023. The deferred principal payments from fiscal year 2022 and fiscal year 2023 were then added to the end of each project’s existing amortization schedule, thereby extending the final maturity by two years. The costs incurred by extending these maturities were more than offset by the positive savings generated from the refunding. The tax-exempt and taxable bonds had an average life of 8.1 years, an all-in cost of capital of 1.46 percent, and a present value from cash flows of $5.75 million net of expenses.

In total, these strategies are expected to accomplish the following:

- Refund / restructure over $120.8 million of debt obligations;
- Generate over $7.2 million savings from net present value of cash flows; and
- Defer approximately $46.3 million of debt service payments through fiscal year 2023 to improve the university’s short-term cash position.
## Debt Restructuring Initiatives

<table>
<thead>
<tr>
<th></th>
<th>Ambler Jonhston 9c</th>
<th>Athletic VT 9d</th>
<th>VCBA 9d</th>
<th>General Obligation 9c (est.)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sale Date:</strong></td>
<td>Nov-20</td>
<td>Jan-21</td>
<td>Jan-21</td>
<td>Apr-21</td>
<td></td>
</tr>
<tr>
<td><strong>Total Bonds Refunded:</strong></td>
<td>$12,520,000</td>
<td>$30,945,000</td>
<td>$62,025,000</td>
<td>$15,351,444</td>
<td>$120,841,444</td>
</tr>
<tr>
<td><strong>Average Life of Issue in Years:</strong></td>
<td>6.9</td>
<td>11.6</td>
<td>8.1</td>
<td>9.9</td>
<td></td>
</tr>
<tr>
<td><strong>Taxable (TX) or Tax Exempt (TE):</strong></td>
<td>TX</td>
<td>TX</td>
<td>TX and TE</td>
<td>TX and TE</td>
<td></td>
</tr>
<tr>
<td><strong>Interest Rate:</strong></td>
<td>1.12%</td>
<td>2.11%</td>
<td>1.46%</td>
<td>1.68%</td>
<td></td>
</tr>
<tr>
<td>*<strong>Present Value of Cash Flows:</strong></td>
<td>$2,070,103</td>
<td>$(200,310)</td>
<td>$5,748,520</td>
<td>$(382,592)</td>
<td>$7,235,721</td>
</tr>
<tr>
<td>FY 21 Reduced Debt Service:</td>
<td>$1,374,938</td>
<td>$622,294</td>
<td>$1,230,904</td>
<td>$7,858,916</td>
<td>$11,087,052</td>
</tr>
<tr>
<td>FY 22 Reduced Debt Service:</td>
<td>$1,324,191</td>
<td>$4,769,213</td>
<td>$8,135,276</td>
<td>$7,656,719</td>
<td>$21,885,399</td>
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<tr>
<td>FY 23 Reduced Debt Service:</td>
<td>$5,736</td>
<td>$4,637,213</td>
<td>$8,713,223</td>
<td>-</td>
<td>$13,356,172</td>
</tr>
<tr>
<td><strong>Total Debt Service Relief:</strong></td>
<td>$2,704,864</td>
<td>$10,028,720</td>
<td>$18,079,404</td>
<td>$15,515,635</td>
<td>$46,328,623</td>
</tr>
</tbody>
</table>

* The PV of cash flows are net of all expenses and include refinancing at lower interest rates where available.
UPDATE ON ADVANCEMENT

Finance & Resource Management Committee - Board of Visitors

MARCH 21, 2021

CHARLES D. PHLEGAR
VICE PRESIDENT FOR ADVANCEMENT
Virginia Tech strives to provide high-quality educational opportunities and fulfill its historic mission as a land-grant institution accessible to all. Affordability is a critical component of that promise. Virginia Tech has implemented a pro-active approach to manage and, to the extent possible, contain administrative and other support costs. This approach has led to below-market tuition pricing without sacrificing support for the university’s strategic objectives, all while operating in a fiscally constrained environment.

The university’s rigorous budget process carefully contemplates new spending and seeks to focus limited resources into academic programs and strategic initiatives that enhance the university’s mission and quality. In addition, the university conscientiously explores opportunities to further streamline business processes, eliminate non-value-added functions, and invest in technologies that ensure the effective and scalable delivery of services to the campus community. These budget decisions and process innovations are reflected by the university’s consistent low spending on institutional support, which has steadily comprised just five percent of total expenditures over the last decade, and favorable ranking among various peer groups in nationally accepted measures of administrative efficiency.

The following report analyzes the university’s cost structure, with special attention paid to Educational and General (E&G) funded expenditures. Where applicable, affordability comparisons to peer institutions are included to highlight the university’s commitment to growing responsibly and providing an affordable education. This report will highlight several administrative investments that demonstrate a balance between achieving cost efficiencies and making progress towards strategic objectives. Cost-consciousness is the overarching theme under which the university pursues its strategic objectives.
Background

Institutions of higher education classify and report expenses programmatically according to their primary function or purpose. Standards are recommended by the National Association of College and University Business Officers (NACUBO) and promulgated through national accounting standards as well as through the Commonwealth of Virginia’s accounting requirements. These accounting standards separately identify academic activities from support activities and allow for comparison between institutions. Administrative costs are primarily represented as expenses within two specific programmatic categories: academic support and institutional support.

Core Expenditures

Instruction includes all activities which are part of the institution’s instructional program. Expenditures for departmental research which are not separately budgeted or organized into an approved research center should be included in Instruction.

Research includes all activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organization unit within the institution. This program does not contain sponsored research only, since internally supported research programs that are separately budgeted should also be included in this program. It includes expenditures specifically budgeted for research.

Public Service includes all activities that provide non-instructional services beneficial to individuals and groups external to the institution. Such activities can include seminars, projects, and various organizational entities established to provide services to particular sectors of the community such as the Cooperative Extension and economic development activities of the university.

Student Services includes all activities whose primary purpose is to contribute to students’ emotional and physical well-being and to their intellectual, cultural, and social development outside the context of the formal instruction program.

Student Financial Assistance this category applies only to monies given in the form of outright grants and trainee stipends to individuals enrolled in the official courses, either for credit or not.

Academic support includes activities that support instruction, research, and public service, including academic computing and academic administration (including deans’ offices). It is important to note that this category also includes the cost of operating the library and, for Virginia Tech, the veterinary hospital.

Institutional support reflects an institution’s central administration. This expense category includes general administrative services, executive management, legal and fiscal operations, public relations and advancement (fund raising), sponsored programs administration, police and emergency response, finance, information technology, and other centralized services. While many of these costs are under the control of the institution, some costs in this category are due to unfunded mandates or compliance with laws and regulations that are required for basic operations of the university’s various academic and support programs.

Depreciation, O&M, and Interest Expense on Capital Assets includes all expenses related to the depreciation, repair and maintenance, and financing of the university’s physical plant.
University Cost Structure

Total Expenditures

The university's cost structure has remained virtually unchanged between FY2011 and FY2020. The relative proportion of expenditures across academic (other core expenditures), core support expenditures (academic support and institutional support), auxiliary, depreciation, operations and maintenance (O&M), and interest expense on capital assets expenditures have varied only slightly from year-to-year, but overall have remained remarkably stable, as seen in Chart 1.

The overall cost structure provides one example of the university's administrative efficiency, with five percent of total expenditures attributed to institutional support expenditures and seven percent to academic support expenditures. These results are consistent with a 2017 analysis by Virginia’s Auditor of Public Accounts (APA) which found that Virginia Tech has relatively low expenditures on both institutional support and academic support expenditures when compared to Virginia’s 15 four-year public higher education institutions.¹

Chart 1: 10-Year Trend in Financial Statement Expenditures by Function

<table>
<thead>
<tr>
<th>Year</th>
<th>Other Core Expenditures</th>
<th>Core Support Expenditures</th>
<th>Auxiliary</th>
<th>Depreciation, O&amp;M, and Interest Expense</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>629.7</td>
<td>65.0</td>
<td>112.5</td>
<td>136.3</td>
<td>1,040.5</td>
</tr>
<tr>
<td>2012</td>
<td>652.7</td>
<td>66.5</td>
<td>117.5</td>
<td>162.0</td>
<td>1,094.0</td>
</tr>
<tr>
<td>2013</td>
<td>709.4</td>
<td>68.5</td>
<td>119.2</td>
<td>164.2</td>
<td>1,177.0</td>
</tr>
<tr>
<td>2014</td>
<td>737.0</td>
<td>79.4</td>
<td>137.6</td>
<td>172.1</td>
<td>1,249.4</td>
</tr>
<tr>
<td>2015</td>
<td>752.8</td>
<td>80.9</td>
<td>137.8</td>
<td>193.3</td>
<td>1,278.9</td>
</tr>
<tr>
<td>2016</td>
<td>783.5</td>
<td>81.7</td>
<td>144.8</td>
<td>192.1</td>
<td>1,339.5</td>
</tr>
<tr>
<td>2017</td>
<td>802.0</td>
<td>87.4</td>
<td>157.7</td>
<td>207.2</td>
<td>1,392.1</td>
</tr>
<tr>
<td>2018</td>
<td>837.6</td>
<td>91.2</td>
<td>167.1</td>
<td>203.7</td>
<td>1,439.8</td>
</tr>
<tr>
<td>2019</td>
<td>867.7</td>
<td>98.9</td>
<td>172.3</td>
<td>216.3</td>
<td>1,484.2</td>
</tr>
<tr>
<td>2020</td>
<td>924.3</td>
<td>106.4</td>
<td>198.1</td>
<td>236.2</td>
<td>1,556.4</td>
</tr>
</tbody>
</table>

Instructional vs. Support Expenditures

In addition to the university's low overall support burden, institutional support expenditures have lagged growth in instructional expenditures over the same period, shown below in Chart 2. Because instruction and institutional support expenditures are primarily funded by state General Funds and student tuition, comparing these growth rates provides insight into how the university is allocating resources from these critical stakeholders. Academic support expenditures have grown faster than instruction and institutional support expenditures due to a purposeful investment in the university's library over this time period, comprising $12 million, or 27 percent, of the total growth in academic support expenditures from FY2011 to FY2020.

Chart 2: 10-Year Trend in Instruction and Core Support Expenditures

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Instruction</td>
<td>250.1</td>
<td>260.1</td>
<td>283.5</td>
<td>298.8</td>
<td>318.7</td>
<td>335.8</td>
<td>357.9</td>
<td>377.5</td>
<td>398.9</td>
<td>426.0</td>
<td>6.1%</td>
</tr>
<tr>
<td>Academic Support¹</td>
<td>61.2</td>
<td>65.0</td>
<td>68.5</td>
<td>79.4</td>
<td>80.9</td>
<td>81.7</td>
<td>87.4</td>
<td>91.2</td>
<td>98.9</td>
<td>106.4</td>
<td>6.3%</td>
</tr>
<tr>
<td>Institutional Support</td>
<td>51.3</td>
<td>52.5</td>
<td>50.7</td>
<td>58.2</td>
<td>56.9</td>
<td>63.1</td>
<td>70.3</td>
<td>75.9</td>
<td>73.4</td>
<td>81.7</td>
<td>5.3%</td>
</tr>
</tbody>
</table>

¹Increase in Academic Support reflects a purposeful investment in the university’s library, comprising $12M (27%) of the growth between FY2011 and FY2020.

208 E&G Expenditures

208 E&G expenditures represent outflows funded by the Commonwealth and the university’s students. Controlled growth in these expenditures will have the greatest effect on the university's ability to maintain its competitive affordability metrics. More than half of these expenditures are dedicated to instruction, with the next largest categories being other core expenditures and academic support costs. Institutional support comprises the smallest functional segment of 208 E&G expenditures, as seen in Chart 3. Institutional support expenditures of $70.7 million comprise 9.4% percent of E&G expenditures compared with 5 percent ($81.7 million) of total expenditures. However, 208 E&G institutional support expenditures support the entire university, not just the 208 division.
Due to the people-centric business model of higher education, the university's costs are heavily concentrated in compensation and benefits (retirement, health care, and other employment-related benefits). While this is true for the enterprise as a whole, it is even more evident in the 208 E&G expenditures. As shown in Chart 4, between 2016 and 2020, 87.1 percent of the growth in expenditures in the academic areas was due to compensation and benefits. The expenditure growth in administrative units was very similar, with compensation and benefits comprising 86.7 percent of the total expenditure growth.

Chart 4: Recent Growth in 208 E&G Expenditures (Accrual Basis)

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2020</th>
<th>$ Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dollars ($)</td>
<td>Percent (%)</td>
<td>Dollars ($)</td>
<td>Percent (%)</td>
</tr>
<tr>
<td>Academic - Comp &amp; Benefits</td>
<td>$387.1</td>
<td>83.8%</td>
<td>$494.2</td>
<td>84.4%</td>
</tr>
<tr>
<td>Academic - O&amp;M</td>
<td>$68.4</td>
<td>14.8%</td>
<td>$81.1</td>
<td>13.9%</td>
</tr>
<tr>
<td>Academic - Fixed Costs &amp; Recovery</td>
<td>$6.5</td>
<td>1.4%</td>
<td>$7.7</td>
<td>1.7%</td>
</tr>
<tr>
<td>Total Academic</td>
<td>$462.0</td>
<td></td>
<td>$585.0</td>
<td></td>
</tr>
<tr>
<td>Admin - Comp &amp; Benefits</td>
<td>$91.5</td>
<td>79.8%</td>
<td>$118.1</td>
<td>81.3%</td>
</tr>
<tr>
<td>Admin - O&amp;M</td>
<td>$23.5</td>
<td>20.5%</td>
<td>$25.9</td>
<td>17.8%</td>
</tr>
<tr>
<td>Admin - Fixed Costs &amp; Recovery</td>
<td>$(0.4)</td>
<td>-0.3%</td>
<td>$1.3</td>
<td>0.9%</td>
</tr>
<tr>
<td>Total Admin</td>
<td>$114.6</td>
<td></td>
<td>$145.3</td>
<td></td>
</tr>
<tr>
<td>Central Costs¹</td>
<td>$24.5</td>
<td></td>
<td>$24.6</td>
<td></td>
</tr>
<tr>
<td>Total 208 E&amp;G Expenditures</td>
<td>$601.1</td>
<td></td>
<td>$754.9</td>
<td></td>
</tr>
</tbody>
</table>

¹Central costs include fixed recurring costs such as central computing charges, software rentals, leases, insurance, and utilities.
Comparisons to Peers

Administrative Efficiency

The following comparisons are a product of the university’s periodic review of administrative costs using the three industry standard perspectives described below. Each uses data sourced from the Integrated Postsecondary Education Data System (IPEDS), which contains publicly available data reported to the federal government by the respective institutions. For each of these perspectives, the university’s performance is compared against its own performance over time as well as with other comparative institutions. At the time of this report, the most recent data available from IPEDS is for fiscal year 2018.

1. Administrative costs as a percentage of core expenditures:
   This comparison, which arrays costs according to their primary purpose, comes from a traditional methodology long employed across institutions of higher education.

2. Administrative costs per student (full-time equivalent, or FTE):
   This methodology offers a student-centric approach and was based upon the Delta Project on Postsecondary Education Costs, Productivity and Accountability. The Delta Project was a well-regarded study of higher education spending, efficiency and ultimately productivity.

3. Administrative Cost Ratio:
   In 2017, the American Council of Trustees and Alumni (ACTA) published a report entitled How Much is Too Much: Controlling Administrative Costs Through Effective Oversight. Using IPEDS data, the ACTA methodology calculates a ratio of Institutional Support (administrative) spending compared to Instruction and Academic Support (instructional) spending.

While each individual metric has limitations, the various comparisons considered together indicate that administrative costs at Virginia Tech are well within industry averages for comparable institutions.

Administrative Costs as a Percentage of Core Expenditures

A long-standing method of reviewing administrative costs in higher education has been to examine the proportion of core expenditures that are utilized for administrative activities. Core expenditures are classified by IPEDS as those expenses essential to the educational activities of the institution, including instruction, research, public service, academic support, student services, institutional support, operation and maintenance of plant, depreciation, and student financial aid. This excludes expenses for the university’s auxiliary enterprises (e.g. dormitories, dining halls).

In fiscal year 2018, 17 percent of Virginia Tech’s core expenditures were attributable to administrative activities (i.e., academic and institutional support costs). As seen in Chart 5a, Virginia Tech’s allocation of resources to administrative costs is significantly below that of the average Virginia research institutions (21 percent), SCHEV peers (21 percent), public research institutions classified by the Carnegie Foundation as having “very high research activity” (20 percent), and the top 20 Land Grant institutions (20 percent). As a percentage of total expenditures, Virginia Tech’s administrative spending is within the lowest quartile among both our SCHEV and Top 20 Land Grant peers.
A longitudinal review of this metric indicates that Virginia Tech’s administrative costs have historically trended well below each of these comparison groups, as seen in Chart 5b.

Chart 5b: Administrative Costs as a Percentage of Core Expenditures
**Administrative Costs per Student FTE**

The Delta Project on Postsecondary Education Costs, Productivity, and Accountability has established a national best practice methodology for examining higher education costs through a student-centric lens. This methodology normalizes administrative expenses by the number of full-time equivalent students (student FTE).

In 2018, Virginia Tech spent $5,672 per student FTE on administrative costs. As seen in Chart 6a below, Virginia Tech spends considerably less on administrative costs per student FTE, spending just 50 percent to 67 percent of the level of peer institutions. For comparison, Virginia Tech’s administrative spending deficit as compared to the Top 20 Land Grant institutions of ($3,954) per student FTE represents ($137.9) million less when applied to the total student FTE.

**Chart 6a: Administrative Spending per Student FTE 2018**
Virginia Tech has maintained this significant efficiency advantage over time, as seen in Chart 6b. From 2014 to 2018 (inflation adjusted to 2018), Virginia Tech increased spending on administrative activities per student FTE by less than one percent (0.6%).

Chart 6b: Administrative Spending per Student FTE 2018

Administrative Cost Ratio

In July 2017, the American Council of Trustees and Alumni (ACTA) published report entitled, How Much is Too Much: Controlling Administrative Costs through Effective Oversight which examined the role that administrative expenditures play in an institution’s overall cost structure. Relying publicly available IPEDS data which includes levels of expenditures by functional classification, the report develops a methodology to determine an institution’s ratio of spending on Institutional Support (administrative spending) relative to Instruction and Academic Support (instructional) spending. Updating this methodology with the latest available data (FY2018) finds that Virginia Tech’s ratio is 0.16, meaning the university spent $0.16 on Institutional Support for each $1.00 of spending on Instruction and Academic Support. This ratio is significantly lower than peer averages, as seen in Chart 7 below.
Virginia Tech’s ratio trended over time demonstrates the relative stability of the university’s expenditure allocations. From FY2011 to FY2020, the university’s Administrative Cost Ratio fell from 0.16 to 0.15 cents per dollar spent on Instruction and Academic Support, as seen below in Chart 8.

### Chart 8: ACTA Administrative Cost Ratio 2011-2020

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<td>98.9</td>
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<td>Institutional Support</td>
<td>51.3</td>
<td>52.5</td>
<td>50.7</td>
<td>58.2</td>
<td>56.9</td>
<td>63.1</td>
<td>70.3</td>
<td>75.9</td>
<td>73.4</td>
<td>81.7</td>
<td>5.3%</td>
</tr>
<tr>
<td>ACTA Administrative</td>
<td>0.16</td>
<td>0.16</td>
<td>0.14</td>
<td>0.15</td>
<td>0.14</td>
<td>0.15</td>
<td>0.16</td>
<td>0.16</td>
<td>0.15</td>
<td>0.15</td>
<td>5.3%</td>
</tr>
</tbody>
</table>

While this perspective provides valuable insight into the university’s institutional support costs relative to its instruction expenditures, it is important to note that these institutional support expenditures support all programs (research, outreach, etc.) and not just instruction.

**Affordability**

**Total Cost per Degree**

Beyond purely administrative cost comparisons, the university also reviews the total cost of producing a Virginia Tech degree as compared to peers. With support from the Lumina Foundation’s Strategy Labs, SCHEV released its *Virginia Postsecondary Strategic Finance Plan* in October 2019. The authors developed a novel standardized cost measure of the operating expenditures required for institutions to graduate students within the Commonwealth’s postsecondary system.
Using IPEDS functional expense categories, the methodology calculates a ‘Cost Per Degree Year,’ based on a calculated “educational and related” set of expenses derived from the overall expenditure data provided to IPEDS.

This study did not provide institutional figures, but the methodology can be replicated using IPEDS data to compare Virginia Tech’s cost per degree year to other peer groups. The university’s comparison to the Top 20 Land Grants is shown in Chart 9. Highlights for fiscal year 2018 are:

- The average cost per degree year for the top 20 Land-Grants was $25,700, or $102,800 for a four-year bachelor’s degree.
- Among the top 20 Land Grant institutions in the nation, Virginia Tech’s cost per degree year ranked among the lowest at $19,211, or $76,844 for a four-year bachelor’s degree.

Chart 9: Cost Per Degree Year – 2018

Each of these measures demonstrate that Virginia Tech more than outperforms our comparison groups in terms of efficiency; Virginia Tech spends considerably less on administrative support than the average comparison group in each measure. This is the result of a cost-conscious and deliberate effort to maximize student benefit while minimizing administrative overhead.

Maintaining Affordability for Virginia Residents

Due to economic volatility and growth in other state budget drivers like Medicaid, the Commonwealth’s ability to subsidize Virginia resident undergraduate education has been negatively impacted over time. Since 2000, students and families have absorbed a greater share of the costs related to higher education. However, when combining state support and student tuition, overall net resources per resident undergraduate have actually fallen ($1,542) since 2000 when adjusting for inflation, shown in Chart 10. This represents a net loss in purchasing power to the institution. The chart below illustrates this gradual shift from General Fund support to tuition and fees.
The decline in state investment has further exacerbated the tension between the university’s mission to provide an affordable, high-quality education and key cost drivers described below. Faced with these challenging budget parameters, the university consistently strives to enhance its ability to measure and improve productivity outcomes in a systematic manner. The cultivation of a cost-conscious culture across all management areas has enabled the university to strategically direct more resources to mission-driven activities while simultaneously continuing efforts to strengthen its capacity to deliver services efficiently and effectively.

**Administrative Cost Pressures and Efficiencies**

The university's administrative enterprise faces increasing operational and cost pressures on a range of fronts. The university expansion into the DC-Metro region and the increased administrative support needed for the Innovation campus, the state’s mandated minimum wage increase, and ever-increasing employee benefits all represent strategic pressures on cost control within the university. Coming from outside the university, unfunded mandates ask more from the administrative enterprise without providing additional resources. Examples of such mandates include the multi-year phased implementation of the U.S. Department of Education’s Campus Cybersecurity Program advancing compliance with NIST800.171 Information Security Standards for Controlled Unclassified Information (CUI) to protect data used in the administration of federal student aid programs, the Commonwealth of Virginia’s multi-year phase-in of additional minimum wage increases, and Title IX programmatic enhancements. Additionally, the Commonwealth’s actions to reduce its net pension liability by requiring larger annual contributions from state agencies and the continuously increasing cost of employer-provided health insurance are adding significant costs pressures on the university administrative enterprise, as well as the university’s core programs.

Additionally, the university implemented five percent across-the-board budget reductions as part of the base 2020-21 budget in anticipation of significant revenue impacts resulting from the ongoing COVID-19 pandemic. That reduction was subsequently lowered to three percent for academic areas as actual enrollment and state support was better understood. The five percent reduction remained in administrative units and auxiliary budgets to fund critical initiatives and manage cost escalation, unfunded mandates, the slight fall 2020 enrollment shortfall for out-of-state students, and the impacts
of COVID-19. For administrative areas, two percent of the five percent reduction was reallocated to fund critical initiatives in administrative areas. These reductions have required campus units to prioritize spending and curtail non-critical spending in operating and personnel (largely unfilled positions). Budget reductions are summarized in Chart 11.

Chart 11: FY2020-21 Budget Reduction Summary

<table>
<thead>
<tr>
<th>Personnel Reductions</th>
<th>Operating Reductions</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Positions</td>
<td>Salary Budget</td>
</tr>
<tr>
<td>208 E&amp;G</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colleges</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Academic Administrative Units</td>
<td>(16.11)</td>
<td>(1,763,684)</td>
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<tr>
<td>Administrative Units</td>
<td>(84.40)</td>
<td>(2,788,036)</td>
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<tr>
<td>Subtotal E&amp;G Reductions</td>
<td>(100.51)</td>
<td>(4,551,720)</td>
</tr>
<tr>
<td>Auxiliaries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comprehensive Fee Units</td>
<td></td>
<td>(5,268,797)</td>
</tr>
<tr>
<td>Room and Board Units</td>
<td></td>
<td>(3,513,421)</td>
</tr>
<tr>
<td>Other Auxiliaries</td>
<td></td>
<td>(1,512,138)</td>
</tr>
<tr>
<td>Total Auxiliary Reductions</td>
<td></td>
<td>(10,294,356)</td>
</tr>
</tbody>
</table>

(a) College reductions distributed through Partnership Incentive Based Budget (PIBB) rather than specific reduction plans.
(b) Auxiliary amounts represent the planned 5% base budget reduction to variable expenses. This does not reflect the full one-time impacts of the pandemic.

The university continues to make investments of personnel and systems to support a growing enterprise in pursuit of its Beyond Boundaries vision for the future. Recent growth in administrative operations have included an increase in advancement and support operations for the $1.5 billion Boundless Impact campaign launched in 2019, the creation of a new Vice President for Health Sciences in 2016, investments into a reimagined Vice President for Human Resources organization, and administrative resources for the newly-integrated Virginia Tech Carilion School of Medicine, whose operations are now fully within Virginia Tech’s overall cost structure. In addition, the university has made important strategic investments in academic and administrative operations corresponding with the 20.0 percent growth in student FTE in the decade spanning 2009-10 to 2019-20, including initiatives such as integrated experiential learning, expansion of transdisciplinary research, and the creation of living-learning communities. These initiatives and others have been met with improved efficiency and increased capacity to scale administrative support systems like those used to process new student applications and classroom assignments.

Examples of recent improvements implemented by various units across the university to enhance efficiency and maximize effectiveness in a resource-constrained environment are detailed in Appendix 1. Though not unique in university operations, Appendix 2 provides an account of improved efficiency, increased capacity, and automation in University Bursar operations. Administrative units and student service areas continue to implement products and services that leverage technology and automation, improve service delivery, eliminate duplicative work efforts, and support the university strategic plan.
Summary

A lean administrative structure means that a greater share of institutional resources can be directed to mission-driven activities such as instruction, research, and public service.

The university’s cost structure compared with peer benchmark data, along with ongoing administrative investments, demonstrate the university’s determination to create cost efficiencies while also pursuing the university’s stated objectives. Moving ahead, the university’s cost-conscious budget process and management structure will continue to maximize limited resources and provide excellent administrative services, despite mounting cost pressures, to keep tuition affordable and achieve strategic goals.
Virginia Tech Efficiency Initiatives

The university continues to implement strategies to strengthen its cost-conscious culture with an emphasis on leveraging technology and automation, improving service delivery, eliminating duplicative work efforts, and enhancing strategic flexibility. As part of these efforts, the university’s annual budget process requires units to identify additional cost-savings strategies and goals. These efficiency efforts promote and facilitate cost-containment efforts before new resource allocations are considered.

Below are some examples of recent improvements implemented by various units across the university to enhance efficiency and maximize effectiveness in a resource-constrained environment:

- **Office of the University Registrar**
  - Partnered with Ad Astra, a leader in higher education scheduling software, to assist the institution to more effectively forecast student course demand, allocate space and faculty resources, and therefore accelerate students time to degree. Ad Astra uses course enrollment history and semester by semester course planning roadmaps for each degree to predict the number of seats needed for future terms. This allows departments the ability to more accurately predict and therefore allocate instructional resources in a timelier manner. This process has positioned the university to efficiently accommodate and manage recent enrollment growth.

- **Undergraduate Admissions**
  - Became the first institution in Virginia to transition from accepting paper high school transcripts to a self-reported academic record system (SRAR), saving manual efforts to process thousands of transcripts per year and providing enhanced access for prospective students and school counselors. The SRAR system led to a significant reduction in the number of cancelled applications, especially from underrepresented and underserved groups, and an acceleration in the completion of application files. The SRAR system also significantly reduced use of paper and printing supplies.
  - Through implementation of the SLATE admissions system, Admissions can more efficiently coordinate all communications, event registration, and application review efforts, leading to a more effective and positive recruitment process for applicants, and ultimately supporting the university’s enrollment growth goals.

- **Campus Planning, Infrastructure, and Facilities (CPIF)**
  - Implementation of the university’s Five-Year Energy Plan designed to improve energy efficiency and reduce energy costs within five years in the most energy-intensive buildings on the Blacksburg campus. Funds for this initiative are used to convert lighting to LED, retro-commission building mechanical systems, install energy meters and complete various other energy conservation measures identified during audit of campus buildings identified as energy hogs.
  - **Insourse Renovation Services** - In FY2020 and FY2021, CPIF began the Renovations transformation, an initiative aimed at transitioning the management of university renovations projects from an outsourced model to an in-house model. This in-house project management team has a vested interest in increasing the overall quality of renovations projects while simultaneously controlling cost. The team aims to provide a higher level of overall customer satisfaction.
  - **Space Management Program** – A comprehensive space management study was predominantly completed during the FY2020 academic year, reviewing the majority of E&G space around the Blacksburg campus to provide up-to-date E&G space data that will lead to more efficient and effective space utilization.
  - **Central Chilled Water System** – enhances campus service while improving efficiency in terms of energy cost, maintenance costs, and cost of new capital projects. Improvements
to central chilled water system include increasing capacity in the two plants and connecting them to create a system loop. This phase of improvement will give us the backbone of a central system that will create opportunities in the future to eliminate the inefficient installation of standalone chillers for future capital projects and decommission existing standalone systems.

- **Business and Management Systems (BAMS)** - in the past fiscal year, BAMS has worked with Analytics and Institutional Effectiveness to move a total of 18 databases supporting the data lake from physical hardware to the cloud by utilizing the Division of IT’s contracted Amazon Web Services (AWS). Additionally, BAMS is in the process of decommissioning a SharePoint framework of numerous servers it has hosted for 13 years in favor of the university’s contracted instance of SharePoint Online and other Microsoft 365 technologies. This includes the BOV portal that is scheduled to go live before the June 2021 BOV meeting. The department’s strategy is to utilize cloud services whenever possible and eliminate its dependency on physical hardware in the next three to five years.

- **Vice President for Finance**
  - Implemented robotic process automation (RPA) to reduce manual labor (data extraction, data entry, reconciliation/validation, etc.) in the Offices of the University Bursar, Controller, and Finance Information Technology. The pilot program expects to have ten automations in production by the end of the fiscal year returning approximately 7,500 hours to the associated business units.
  - Implemented Chrome River system to automate the P-Card and Travel reimbursement processes, reducing transactions processing time for Accounts Payable.
  - Launched online Auxiliary Budget Development System to streamline the annual budget process for over 40 business units, reducing manual effort and elevating strategic review.

- **Human Resources**
  - Consolidation of university talent acquisition advertising costs that were previously dispersed and duplicated across campus. Consolidation of The Chronicle of Higher Education contract provides a central source for all teaching/research, research, and administrative faculty position online advertising, and provides departments with discounted print advertisement. This initiative is estimated to save approximately $68,000 over a two-year period while providing enhanced advertisement services to campus.
  - Development of a one-stop shop on the Human Resource (HR) web site where managers and supervisors, employees in HR roles, and all other university employees can find a comprehensive suite of HR transactions, a forms library, hiring and onboarding content, and answers to common HR questions. This has been particularly useful during the ongoing pandemic, as many employees can find remote assistance for their HR needs.

- **Virginia Tech Electric Systems (VTES)** – updating billing and online payment system that will reduce paper usage and many manual processes within the business unit. The updated online payment system will be more customer friendly to encourage paperless billing, electronic notices, and electronic bill payments. These system updates will also save the university printing and mailing costs while bringing VTES closer to industry standard customer service expectations.

- **Parking Services** - fully automated the access and revenue control functions of the North End Center garage. This included upgrading the equipment at the entrance and exit gates to allow for automated 24/7/365 functionality as well as a walk-up pay station for self-service, saving personnel costs and streamlining the operations of the garage.

**Capital Program Initiatives**

- The administrative enterprise introduced organizational changes to ensure critical capital projects come to fruition by boosting the efficacy of the capital planning, construction, and financing processes. Over 22 capital construction projects totaling nearly $1.15 billion across Blacksburg, Roanoke, the Greater Washington, D.C. metro region, the commonwealth, and Switzerland are included in the university’s Six-Year Capital Outlay.
Plan for 2022-28. The creation of a high-performance cross-functional team will facilitate strategic, enterprise-wide long-range physical planning, advancement of the capital outlay program, space and land use, and real estate activities. To more closely integrate these efforts, the leader of the high-performance team reports dually to the vice president for campus planning, infrastructure, and facilities and the vice president for finance.

- **Insourcing Construction Field Representatives** – established an in-house team of construction field representatives that monitor ongoing construction activities, which saves both time and capital project soft costs for work previously performed by third-party contractors.

- **Electronic Drawing Review** – construction drawings are now reviewed electronically by the University Building Official, which saves both time and printing costs associated with the activity.

- **Electronic Billing** – income leases and agreements are now billed electronically which improves service delivery and results in cost savings in labor and materials.

- **Cloud-based File Management Systems** – Established efficient, remotely accessible IT storage for improved retrieval and management of construction documents and related files.
Background: The Office of University Bursar (OUB) is responsible for billing student tuition and fees, as well as ensuring the proper receipt and application of all payments on each student’s account. OUB works closely with University Scholarships and Financial Aid, third parties, and students to obtain, coordinate, facilitate, and maintain financial aid resources through payment of Title IV and other financial aid, outside scholarships, and the university’s tuition installment payment plan. OUB manages cash for Title IV financial aid funds and maintains the university’s federal and institutional loan programs. OUB also processes receipts (in excess of $1 billion annually) and disbursements for payroll, vendor, and financial aid payments; and in conjunction with the Controller’s Office, seeks to maximize the number of such disbursements that are made electronically. With the implementation of Banner Accounts Receivable ERP in 2000, the university identified ways to work more efficiently, automating many routine and recurring tasks through system modifications and jobs.

An independent review by Ernst & Young in 2018 found that the work of the bursar office utilizes available technology to be innovative and capitalize on the skillsets of an experienced staff. The report compared OUB favorably to industry in almost all of their benchmarking metrics, noting the number of FTE’s that process receivables is higher than other industries primarily due to conditions not encountered by industry such as the federal financial aid regulations.

Digital Transformation: Through the years, OUB operations have benefitted from more traditional automation efforts. Digital transformation began in 2005 in OUB with the overhaul of processes, operations and customer facing services. The strategic outsourcing of online student billing and payment options with real-time account activity facilitates efficient and improved services. Students and their authorized payers receive email notifications of new statements and have access to remit payments 24/7 through a self-service portal.

Through the vendor solution, VT reintroduced credit card payment options which had been eliminated decades earlier during budget reductions. While the Government and Higher Education Payment Program allows the university to assess a variable service fee as a separate transaction to cover acceptance costs, the 2.65 percent service charge (payable to the vendor, not the university) on a credit card payment also encourages payment by eCheck or installments. The introduction of real time payments presented opportunities to automate reconciliation of activities, settle batches by type, and improve the effectiveness of financial holds to prompt payment of account balances. Fully automated financial holds generally prevent registration for future terms until payments are received, serving as one of the university’s most effective collection techniques.

Electronic payments from students improved efficiency in the operations and eliminated the need for bank provided lockbox services. Today, over 94 percent of payment transactions are received through electronic channels. While opportunities to
further automate remaining heterogenous payment types are uniquely difficult, we continue to seek vendor solutions and sources that will reduce remittance by mail from third party entities such as college savings plan providers and private scholarship sponsors.

With the elimination of paper tuition bills and postage, the university has realized a 56 percent reduction in the cost per statement beginning in 2006, and through contract negotiations a ceiling on cost per statement resulted in additional savings beginning in 2015. Savings in 2019-20 from e-Bill are estimated at more than $180,000 over traditional, paper-based processes as shown in Chart 1. Perhaps most importantly with enrollment growth on the horizon (in 2006), the electronic billing and payment solution provided capacity to successfully bill and receive payment from an unlimited number of students.

Chart 1. Student Account Annual Billing Costs

In 2008, Virginia Tech upgraded the in-house payment plan solution developed in the early 1990s moving away from paper to electronic enrollment to expedite processing over 8,600 applications annually. With the need to upgrade security and processing software on the horizon, the university made the decision in 2014 to move to a vendor hosted software. Beginning in fall 2017, the university expanded the payment plan options integrating graduate assistants’ payment plans and eliminating the less efficient payroll deduction process that had existed for a decade or so prior. Unlike many higher education institutions that outsource payment plan administration with enrollment fees going to the vendor, Virginia Tech administers its payment plans in house, generating more than $375,000 of revenue in 2019-20.

Virginia Tech administers its payment plans in house, generating more than $375,000 of revenue in 2019-20.
2019-20 of which two-thirds was used to directly support operating and salary expenses in the bursar office.

While some of our modernizations had roots in replacing end of life products, the introduction of e-payment channels encouraged more efficient payment mechanisms across the university and consolidation of vendor contracts readying Virginia Tech for compliance with the Payment Card Industry Data Security Standard (PCIDSS) introduced in late 2004. PCIDSS is a comprehensive information security standard for organizations that handle branded credit cards requiring annual validation of compliance. The university committed one new FTE in 2011-12 to manage payment card compliance across the university. With the implementation of a second preferred hosted payment solution in 2015, the bursar office worked with several high-volume merchants on campus to move to a more cost-efficient solution reducing card and e-check payment acceptance processing fees 75 percent – 94 percent depending on transaction volume. In 2019-20, the university had more than 60 merchants and accepted 585,000 payment card transactions valued at $76.2 million. The bursar office quickly on-boarded several new merchants at the beginning of the pandemic as online payment acceptance became the viable payment channel for operations newly available online.

Also, on the payment front, the university implemented a new vendor-hosted cashiering solution in 2015 achieving its goals to streamline processes to record revenues in the finance ledger, eliminate paper-based departmental deposits, and promote a fully electronic reconciliation of bank deposit activities. Through the reconciliation improvements alone, leaders estimate a savings of 1,000 hours annually. The cashiering solution was the foundation for the university’s first Robotics Process Automation in 2020 reconciling departmental and credit card activities to bank deposits and posting the transactions using robotics. A second robotics automation is near completion that will support batch posting of payments from varying remittance sources, achieving a long-time goal of a more efficient batch payment processor to support demand during peak periods. Though challenging to calculate savings from these two automations due to changes in activity levels during the pandemic, we initially projected the cashiering automation to return 2,000-person hours to the enterprise.

While the bursar office supports university-wide funds handling and deposit activities, daily operations primarily result from tuition and fee assessment and collection activities. The university introduced its first college/program specific fee in 2007-08. Today, there are ten college/program specific fees, ten programs with unique tuition rates, and numerous course fees. As the complexity of tuition changes to meet the needs of a growing university, the rule sets required to properly assess tuition have increased significantly. One result is more opportunities to engage with students and parents individually to answer questions about the charges on tuition statements. At payment deadline, the team can answer as many 125 calls an hour in addition to handling peak level operational transactions and responding to customer emails. With 32 percent growth in the number of student FTEs since 2005, the student to bursar staff ratio has increased 45 percent.
As a result of automation efforts and efficiencies gained in processes, today’s bursar office staff is ten percent smaller than it was in 2005 while serving 10,000 more students and families in a more complex student finance environment.

The team actively looks for, engages with campus partners, and identifies opportunities each year for improvement in operations and procedures. With goals for improved operations like introducing robotics processing and timely customer service that challenge management and employees, the team has been successful in meeting its operational goals even with significant increases in the student population and unforeseen events like the pandemic. Projects are underway to automate the recording of outside scholarships reported by students and to create PDF copies of electronic loan agreements for Perkins loans during program winddown. The team is also exploring AI-powered chatbots to answer simple customer inquiries in conjunction with Enrollment Services and the Office of University Scholarships and Financial Aid in effort to find the right medium to serve tomorrow’s students and parents in a better, more efficient and more cost-effective way.
Update on University Cost Efficiencies

DWAYNE PINKNEY, SENIOR VICE PRESIDENT AND CHIEF BUSINESS OFFICER

MARCH 21, 2021
University Cost Structure Overview

- Composition of cost is unchanged over the last ten years.
- Support costs remain a small percentage of the university’s total expenditures.
- Academic Support costs are growing faster than Institutional Support costs.

**Academic Support** includes activities that support instruction, research and public service as well as university library and the veterinary hospital.

**Institutional Support** includes central administration (i.e. executive management, legal and fiscal operations, public relations and advancement, sponsored program administration, police and emergency response, etc.) activities that support the entire operation including instruction, research and public service.

- The university consistently ranks favorably among its various peer groups in nationally accepted measures of administrative efficiency.
10-Year Trend in Financial Statement Expenditures by Function

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Other Core Expenditures</td>
<td>629.7</td>
<td>652.7</td>
<td>709.4</td>
<td>737.0</td>
<td>752.8</td>
<td>783.5</td>
<td>802.0</td>
<td>837.6</td>
<td>867.7</td>
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<td>Core Support Expenditures</td>
<td>61.2</td>
<td>65.0</td>
<td>68.5</td>
<td>79.4</td>
<td>80.9</td>
<td>81.7</td>
<td>87.4</td>
<td>91.2</td>
<td>98.9</td>
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<tr>
<td>Academic Support</td>
<td>61.2</td>
<td>65.0</td>
<td>68.5</td>
<td>79.4</td>
<td>80.9</td>
<td>81.7</td>
<td>87.4</td>
<td>91.2</td>
<td>98.9</td>
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<tr>
<td>Institutional Support</td>
<td>51.3</td>
<td>52.5</td>
<td>50.7</td>
<td>58.2</td>
<td>56.9</td>
<td>63.1</td>
<td>70.3</td>
<td>75.9</td>
<td>73.4</td>
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<tr>
<td>Auxiliary</td>
<td>162.0</td>
<td>159.6</td>
<td>176.3</td>
<td>181.5</td>
<td>196.2</td>
<td>203.0</td>
<td>218.7</td>
<td>227.8</td>
<td>227.9</td>
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<tr>
<td>Depreciation, O&amp;M, and Interest Expense</td>
<td>136.3</td>
<td>164.2</td>
<td>172.1</td>
<td>193.3</td>
<td>192.1</td>
<td>207.2</td>
<td>203.7</td>
<td>207.3</td>
<td>216.3</td>
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<tr>
<td>Total</td>
<td>1,040.5</td>
<td>1,094.0</td>
<td>1,177.0</td>
<td>1,249.4</td>
<td>1,278.9</td>
<td>1,338.5</td>
<td>1,382.1</td>
<td>1,439.8</td>
<td>1,484.2</td>
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</tbody>
</table>

1 Other core expenditures include Instruction, Research, Public Service, Student Services, and Student Financial Assistance expenditures.
Growth in Instruction and Academic Support outpaced that of Institutional Support.

### 10-Year Trend in Financial Statement Expenditures

<table>
<thead>
<tr>
<th>Year</th>
<th>Instruction</th>
<th>Academic Support</th>
<th>Institutional Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>250.1</td>
<td>61.2</td>
<td>51.3</td>
</tr>
<tr>
<td>2012</td>
<td>260.1</td>
<td>65.0</td>
<td>52.5</td>
</tr>
<tr>
<td>2013</td>
<td>283.5</td>
<td>68.5</td>
<td>50.7</td>
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<tr>
<td>2014</td>
<td>298.8</td>
<td>79.4</td>
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<tr>
<td>2015</td>
<td>318.7</td>
<td>80.9</td>
<td>56.9</td>
</tr>
<tr>
<td>2016</td>
<td>335.8</td>
<td>81.7</td>
<td>63.1</td>
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<tr>
<td>2017</td>
<td>357.9</td>
<td>87.4</td>
<td>70.3</td>
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<tr>
<td>2018</td>
<td>377.5</td>
<td>91.2</td>
<td>75.9</td>
</tr>
<tr>
<td>2019</td>
<td>398.9</td>
<td>98.9</td>
<td>73.4</td>
</tr>
<tr>
<td>2020</td>
<td>426.0</td>
<td>106.4</td>
<td>81.7</td>
</tr>
</tbody>
</table>

**Annualized Change (%)**
- Instruction: 6.1%
- Academic Support: 6.3%
- Institutional Support: 5.3%

*Increase in Academic Support reflects a purposeful investment in the university's library, comprising $12M (27%) of the growth between FY2011 and FY2020.*

---

**Diagram:**

- **Legend:**
  - Red line: Instruction
  - Orange line: Academic Support
  - Gray line: Institutional Support

- **X-axis:** Year (2011-2020)
- **Y-axis:** Dollars in millions (50.0-450.0)

---

Growth in Instruction and Academic Support outpaced that of Institutional Support.
The American Council of Trustees and Alumni (ACTA) Administrative Cost Ratio indicates the university spends $0.16 on Institutional Support for every $1 spent on Instruction and Academic Support costs.
208 E&G Cost Structure Overview

- Examining State General Fund and T&F Funded (208 E&G) expenditures enhances consideration of affordability.

- Instructional, Institutional Support, and Academic Support costs comprised 77 percent of 208 E&G expenditures in FY2020.

- Compensation and Benefits made up 89 percent of 208 E&G expenditure growth between FY2016 and FY2020.
Composition of 208 E&G Expenditures
FY2020

Instruction 53.9%
Academic Support 13.4%
Other Core1 13.3%
O&M 10.0%
Institutional Support 9.4%
VetMed Ancillary 2.0%
Libraries 3.4%
Other Academic Support Costs 8.0%

1Other Core includes: Research, Public Service, Student Services, and Student Financial Aid.
89 percent of the recent growth in 208 E&G expenditures was in Comp & Benefits.

Comp & Benefits were 81 percent of total expenditures in FY2020 and comprised of 75 percent compensation and 25 percent benefits.

The growth in Comp & Benefits was similar across academic areas and administrative units.
### Comp & Benefits Drive 208 E&G Expenditure Growth

Change from FY2016 to FY2020 Financial Statements (Accrual Basis)

All dollars in millions

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2020</th>
<th>$ Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dollars ($)</td>
<td>Percent (%)</td>
<td>Dollars ($)</td>
<td>Percent (%)</td>
</tr>
<tr>
<td>Academic - Comp &amp; Benefits</td>
<td>$387.1</td>
<td>83.8%</td>
<td>$494.2</td>
<td>84.4%</td>
</tr>
<tr>
<td>Academic - O&amp;M</td>
<td>68.4</td>
<td>14.8%</td>
<td>81.1</td>
<td>13.9%</td>
</tr>
<tr>
<td>Academic - Fixed Costs &amp; Recovery</td>
<td>6.5</td>
<td>1.4%</td>
<td>9.7</td>
<td>1.7%</td>
</tr>
<tr>
<td><strong>Total Academic</strong></td>
<td>$462.0</td>
<td></td>
<td>$585.0</td>
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<tr>
<td>Admin - Comp &amp; Benefits</td>
<td>91.5</td>
<td>79.8%</td>
<td>118.1</td>
<td>81.3%</td>
</tr>
<tr>
<td>Admin - O&amp;M</td>
<td>23.5</td>
<td>20.5%</td>
<td>25.9</td>
<td>17.8%</td>
</tr>
<tr>
<td>Admin - Fixed Costs &amp; Recovery</td>
<td>(0.4)</td>
<td>-0.3%</td>
<td>1.3</td>
<td>0.9%</td>
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<tr>
<td><strong>Total Admin</strong></td>
<td>$114.6</td>
<td></td>
<td>$145.3</td>
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<tr>
<td>Central Costs¹</td>
<td>$24.5</td>
<td></td>
<td>$24.6</td>
<td></td>
</tr>
<tr>
<td><strong>Total 208 E&amp;G Expenditures</strong></td>
<td>$601.1</td>
<td></td>
<td>$754.9</td>
<td></td>
</tr>
</tbody>
</table>

¹Central costs include fixed recurring costs such as central computing charges, software rentals, leases, insurance, and utilities.

- 87 percent of the recent growth in 208 E&G expenditures in academic areas and administrative units was in Comp & Benefits.
# Administrative Personnel Investments

<table>
<thead>
<tr>
<th>Senior Management Area</th>
<th>Increase in Filled Full-time Administrative Positions/(% Change) Since FY2016</th>
<th>Strategic Objective/Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>VP Advancement</td>
<td>28.1 / (23.6%)</td>
<td>Gifts up 75% since FY2016.</td>
</tr>
<tr>
<td>VT School of Medicine</td>
<td>52.8 / (New)</td>
<td>Expanded presence in Health Sciences.</td>
</tr>
<tr>
<td>VP Health Sciences</td>
<td>25.4 / (1,080%)</td>
<td>Expanded presence in Health Sciences.</td>
</tr>
<tr>
<td>Colleges</td>
<td>87.3 / (11.2%)</td>
<td>Destination Areas, Academic Advising, Support for 12.5% growth in Student FTEs since FY2016.</td>
</tr>
</tbody>
</table>

Source: 208 E&G full-time filled administrative positions, fall semester snapshot (2015 and 2020).
### Administrative Operational Investments

<table>
<thead>
<tr>
<th>Project</th>
<th>Strategic Objective/Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Finance Division</strong></td>
<td>163,000 transactions processed across five tasks since June 2020 (~2 FTEs).</td>
</tr>
<tr>
<td>- Robotic Process Automation</td>
<td></td>
</tr>
<tr>
<td><strong>Undergraduate Admissions</strong></td>
<td>Integrated all elements of recruiting and applicant review to provide a more effective and positive process for applicants, resulting in record applications of 42,084 (up nearly 36% compared to 2020 cycle).</td>
</tr>
<tr>
<td>- Implementation of SLATE</td>
<td></td>
</tr>
<tr>
<td>- Processing Platform</td>
<td></td>
</tr>
<tr>
<td><strong>Registrar</strong></td>
<td>Improved forecasting student course demand to help the institution effectively allocate space and faculty resources.</td>
</tr>
<tr>
<td>- Partnership with Ad Astra</td>
<td></td>
</tr>
<tr>
<td>- Classroom Assignments</td>
<td></td>
</tr>
</tbody>
</table>

- Other investments in the administrative enterprise center on:
  - Data collection and data-driven decision making.
  - Elimination of paper-based processes.
  - Investments in cost-saving energy efficient infrastructure.
  - Administrative reorganizations to improve service delivery.
Extraordinary Growth with Fewer Bursar Staff
2005—2020

- Increase in Number of Student FTEs: 32%
- Decrease in Number of Bursar FTEs: 10%
- Increase in Student Refunds Processed: 146%
- Significant impact in FY20 due to COVID19
- Increase in Number of Billing Rules: 47%
- Increase in Revenue Funds to Reconcile: 39%
- Increase in VT Scholarship Activity: 139%
- Increase in Loan and Pell Disbursements: 48%
Administrative Cost Pressures

- Continued expansion of unfunded mandates:
  
  **Federal**
  - NIST800.171 Information Security Standards for Controlled Information currently recommended for Title IV financial aid activities.
  - Title IX programmatic enhancements.
  
  **State**
  - Multi-year phased in minimum wage increases.
  - Increased pension expense due to the Commonwealth’s efforts to reduce the pension liability.
  - Increasing costs of employee healthcare.
  
- Future expansion in the DC-Metro Region/Innovation Campus.
- Response to COVID-19 Pandemic.
## Budget Reductions

- **Academic area budgets reduced three percent.**
- **Administrative unit budgets reduced five percent, with two percent reallocated to fund critical initiatives in administrative areas.**
- **Auxiliary budgets reduced five percent, which does not reflect the full one-time impact of the COVID-19 pandemic.**

### Operating Reductions

<table>
<thead>
<tr>
<th>Positions</th>
<th>Salary Budget</th>
<th>Operating Budget</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Colleges</strong></td>
<td>na</td>
<td>na</td>
<td>$ (8.5)</td>
</tr>
<tr>
<td>Academic Administrative Units</td>
<td>(16.11)</td>
<td>(1.7)</td>
<td>(3.8)</td>
</tr>
<tr>
<td>Administrative Units</td>
<td>(84.40)</td>
<td>(2.8)</td>
<td>(2.7)</td>
</tr>
<tr>
<td><strong>Subtotal E&amp;G Reductions</strong></td>
<td>(100.51)</td>
<td>$ (4.5)</td>
<td>$ (15.0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Positions</th>
<th>Salary Budget</th>
<th>Operating Budget</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Auxiliary Reductions</strong></td>
<td>na</td>
<td>na</td>
<td>$ (10.3)</td>
</tr>
</tbody>
</table>

---

1. College reductions distributed through Partnerships Incentive Based Budget (PIBB) rather than specific reduction plans.
2. Salary and operating budget reductions not reported separately.
Discussion
Report of Actions Taken Under the Delegation of Authority and Policy 4240

- Ken Miller, Vice President for Finance
- Bryan Garey, Vice President for Human Resources

March 21, 2021
• **Agenda**

  ▪ **Delegation of Authority**
    - Quarterly report on actions taken and corresponding financial and programmatic impacts following the delegation of authority to President Sands in June 2020.

  ▶ **University Policy 4240: Layoff Policy for Staff**
    - Quarterly report on actions taken and corresponding financial and programmatic impacts under University Policy 4240 for Temporary Workforce Reductions (TWFR) and Layoffs of staff following BOV reaffirmation of the policy in June 2020.
Delegation of Authority - Programmatic Impact

- **Action:**
  - President Sands used the Delegation of Authority for necessary actions needed in Athletics that resulted in programmatic impacts and financial savings.

- **Programmatic Impact:**
  - Communications in college athletics has changed over the past 5-10 years. There is a high demand to provide digital content through brief videos that need to be posted to social media almost instantaneously; this is quite different from writing print news articles following an event.
• **Delegation of Authority - Programmatic Impact**

  **Results:**
  
  - Strategic Communications office was restructured to the Creative Solutions office.
  - Primary focus will be to aggressively market Virginia Tech coaches, student athletes, and the university to recruits, fans, and donors across the nation through work in social media, graphic design, video, and digital and written media.
Delegation of Authority - Financial Impact

Financial Impact:

- Calendar year savings: $1,251,965
- Effective dates: Jan. 10, 2021 through Dec. 24, 2021
- Salary reductions - 113 A/P Faculty and 24 university staff
- Temporary workforce reduction (TWFR) - 17 classified staff
- Layoffs - 4 employees in the Strategic Communications group
- Athletics used a tiered reduction approach based on annual salary and all actions were approved at the November 16, 2020 Board of Visitors meeting
University Policy 4240: Layoff Policy for Staff

The Board reaffirmed University Policy 4240: Layoff Policy for Staff through a resolution on May 29, 2020.

The resolution stated that “… the potential implementation of Policy 4240 would be considered a mitigating strategy that would be a component of the comprehensive budget planning process that will also include any necessary permanent base budget reductions to operating and personnel expenditures for the university to respond to reductions in university resources, and said implementation would be conducted in a transparent manner.”
## Summary of Actions for University Policy 4240: Layoff Policy for Staff

<table>
<thead>
<tr>
<th>FY 2021</th>
<th>Layoff</th>
<th>TWFR</th>
<th>Total</th>
<th>Financial Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Senior Management Area</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College of Veterinary Medicine</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>$47,000</td>
</tr>
<tr>
<td>Vice President for Outreach &amp; International Affairs</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>$53,000</td>
</tr>
<tr>
<td>Vice President for Research¹</td>
<td>0</td>
<td>7</td>
<td>7</td>
<td>$58,000</td>
</tr>
<tr>
<td>Vice President for Student Affairs²</td>
<td>9</td>
<td>167</td>
<td>176</td>
<td>$7,800,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>12</td>
<td>176</td>
<td>188</td>
<td>$7,958,000</td>
</tr>
</tbody>
</table>

¹ All actions associated with VTTI
² Majority of actions associated with Dining Services
• Overall employment remained steady across the different employment categories.
• Slight dip in staff employment due to the hiring freeze:
  • No long term impact
• Decrease in student wage employees:
  • Impacts to student wage mainly associated with dining services
  • The university kept the majority of the student wage employees employed through the end of the Spring 2020 semester as part of the university’s commitment to maintain jobs to the extent possible.
Delegation of authority was targeted and leveraged in only one unit (Athletics).
- Provided a means to restructure and contribute toward the budget shortfalls experienced through COVID-19.
- Layoffs and workforce reductions were limited, also targeted to areas (Dining) with significant budget challenges experienced during the crisis.
- Preserving talent to position Virginia Tech through and beyond the crisis remains a priority.
In November 2020, the university provided the Board of Visitors with an update on the financial impact of the COVID-19 pandemic on the campus budget as determined during the Fall semester and as projected for the 2020-21 fiscal year. The impact across campus was uneven, with the primary impact on self-generated revenue activities in Auxiliary Enterprises due to the university’s response to ensure the safety and well-being of the campus community. This identified a $63.2 million operating gap. Subsequently, the university has developed a plan for closing this budget gap and recommends approval by the Board.

While the university worked diligently to minimize the financial impact, the university was open and operating. Efforts to minimize impact spanned cost control efforts to philanthropy (Athletics). The impact is summarized below:

<table>
<thead>
<tr>
<th>2020-21 Auxiliary Enterprise Budget Gap Due to the COVID-19 Pandemic as of December 31, 2020</th>
<th>Net (Dollars in Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dining</td>
<td>-$ 23.2</td>
</tr>
<tr>
<td>Athletics</td>
<td>-19.1</td>
</tr>
<tr>
<td>Residential</td>
<td>-8.9</td>
</tr>
<tr>
<td>Inn at VT: Hotel &amp; Conference Center</td>
<td>-4.6</td>
</tr>
<tr>
<td>Electric Service</td>
<td>-1.6</td>
</tr>
<tr>
<td>Parking &amp; Fleet Services</td>
<td>-1.8</td>
</tr>
<tr>
<td>Health Services</td>
<td>-1.3</td>
</tr>
<tr>
<td>Other Units (Steger Center, Printing, Center for Arts, Library Photocopy, Licensing/Trademark)</td>
<td>-2.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>-$ 63.2</strong></td>
</tr>
</tbody>
</table>

Recognizing the financial challenges faced by public universities, the Commonwealth of Virginia provided temporary authority for the 2020-22 biennium impacts caused by the COVID-19 pandemic during the 2020 sessions. This allowed a reduction of the recovery of the indirect cost of Auxiliary Enterprise programs. In addition, it authorized the use of other fund sources as approved by the Board of Visitors after having reviewed the measure of financial status in the most recent Auditor of Public Accounts (APA) Higher Education Comparative Report. The use of other fund sources is limited to scholarship support for Intercollegiate Athletics. The resolution is to be shared with the Chairs of the
House Appropriations and Senate Finance and Appropriations Committees. See Attachment A for the complete text of these new temporary authorities. The university’s recommended financial plan complies with these requirements as explained below.

The decrease in revenues and expenses is due to the reduction of business activities as a result of COVID-19. A portfolio of strategies was developed to minimize the impact on the university’s finances. The plan is summarized below:

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Amount (Dollars in Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Support</td>
<td></td>
</tr>
<tr>
<td>CARES Act (via Commonwealth of Virginia)</td>
<td>$10.7</td>
</tr>
<tr>
<td>2nd Stimulus (Consolidated Appropriation Act)</td>
<td>18.1</td>
</tr>
<tr>
<td>State Support</td>
<td>4.0</td>
</tr>
<tr>
<td>Restructuring of Existing Debt (FY21)</td>
<td>10.8</td>
</tr>
<tr>
<td>One-time Savings (health insurance holiday)</td>
<td>4.8</td>
</tr>
<tr>
<td>Relief from Institutional Indirect Cost Assessments</td>
<td>13.9</td>
</tr>
<tr>
<td>Expenditure Savings/Cost Control</td>
<td>0.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$63.2</strong></td>
</tr>
</tbody>
</table>

The APA’s comparative report is lengthy and is included as Attachment C to the detailed report supporting the resolution. Attachment B includes a summary of just the financial ratios included in the report to assist in the overall review.

Although the original intent of the APA report was to enable the state legislature to get an overview of the financial health of all state institutions of higher education, the new Board of Visitors review requirement was intended to focus the Board’s attention on the financial health of their respective institutions and the potential financial impact of the funding plan to assist their auxiliaries.

The report shows numerous financial ratios for fiscal years 2015, 2016, and 2017 and provides explanations and context for the ratios. Additionally, it includes the composite financial index (CFI) (with and without the institution’s foundations), which is a weighted average of four of these core ratios. A CFI score greater than or equal to 3.0 generally indicates that an institution is financially healthy. The report indicates that reviewing trends in the CFI over time helps to adjust for the impact of significant one-time events that may disproportionately impact a ratio in a given year. The CFI is also used by the Southern Association of Colleges and Schools, Commission on Colleges during their accreditation reviews of the university.
As shown in more detail in the presentation related to the university’s financial statements, the university demonstrates financial health compared to the benchmarks, if applicable, for the core financial ratios and the CFI.

### Key Financial Ratios of Financial Health Cited in APA Comparative Report

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Reserve</td>
<td>Snapshot of the financial strength and flexibility of an institution calculated by dividing expendable net assets by total expenses. The accepted benchmark for this ratio is 0.4.</td>
</tr>
<tr>
<td>Viability</td>
<td>Availability of expendable net position to cover long-term debt and indicates whether an institution can assume new debt calculated by dividing expendable net assets by long-term debt. The accepted benchmark for this ratio is 1.0 or greater.</td>
</tr>
<tr>
<td>Net Operating Revenue</td>
<td>Indicates whether an organization is living within its available resources calculated by dividing net income less capital revenues by noncapital revenues.</td>
</tr>
<tr>
<td>Return on Net Position</td>
<td>Answers whether the university is achieving a positive economic return on its investment of resources calculated by dividing change in net assets by total net assets.</td>
</tr>
</tbody>
</table>

Consistent with the Auditor of Public Accounts report, the impacts of Pension and Other Post Employment Benefits have been excluded.

Measuring the Overall Level of Financial Health

- **Primary Reserve Ratio Without Pension & OPEB**
  - 2015: 0.38, 2016: 0.42, 2017: 0.42, 2018: 0.41, 2019: 0.43, 2020: 0.41

- **Viability Ratio Without Pension & OPEB**

- **Net Operating Revenue Ratio**
  - 2015: 0.02, 2016: 0.01, 2017: 0.01, 2018: 0.03, 2019: 0.03, 2020: 0.01

- **Return on Net Position Ratio**
  - 2015: 0.04, 2016: 0.07, 2017: 0.04, 2018: 0.05, 2019: 0.06, 2020: 0.06
Measuring the Overall Level of Financial Health

Variations of these ratios and numerous other ratios and qualitative factors are also used by the bond rating agencies when assessing the financial health of the university. The recently affirmed ratings of Aa1 from Moody’s and AA from Standard & Poor’s with a stable outlook provide additional confirmation of the university’s financial health.

Given the financial strength of the university and the fact that the majority of the solutions to fund the above budget gaps or operating deficits are from new one-time resources, it is anticipated that the implementation of the plan will have only a marginal impact on the financial health of the university.

Moving forward, the university will continue to monitor and manage the financial impacts created by the COVID-19 pandemic on university operations and bring updates back to the Board of Visitors as needed. As the details of the plan are implemented, some limited temporary reductions in reserve balances, which will be scheduled to be repaid in future years, or internal loans may need to be considered for a portion of the plan not funded from one-time sources.
RESOLUTION APPROVING THE FINANCIAL PLAN TO CLOSE THE BUDGET GAP CAUSED BY THE COVID-19 PANDEMIC

WHEREAS, the COVID-19 pandemic had significant impact on the university’s Auxiliary Enterprise financial operations; and,

WHEREAS, the university shared the impact, as understood during Fall 2020, with the Board of Visitors at the November 2020 meeting; and,

WHEREAS, this identified a $63.2 million budget gap in the Auxiliary Enterprises for fiscal year 2020-21; and,

WHEREAS, § 3-4.01 item 3 of Chapter 1283 and Chapter 56 of the Virginia Acts of Assembly allows institutions to forego the collection of full indirect cost; and,

WHEREAS, § 3-4.01 item 4 of Chapter 56 of the Virginia Acts of Assembly requires Board of Visitors approval of such funding plan; and

WHEREAS, the university has identified a plan for closing this budget gap using primarily new one-time resources and the new legislative authorities mentioned above, and therefore the plan is anticipated to have limited impact on the financial health of the university;

NOW THEREFORE BE IT RESOLVED, that the university’s plan for closing the budget gap created by the pandemic be approved.

RECOMMENDATION:

That the resolution approving Virginia Tech’s financial plan to close the budget gap created by the COVID-19 pandemic be approved.

March 22, 2021
Chapter 1283 of the Virginia Act of Assembly (FY20)

§ 3-4.01
3. Institutions of higher education shall have the authority to reduce the recovery of the full indirect cost of auxiliary enterprise programs to the educational and general program for the 2019-2020 fiscal year as a result of the significant financial impact on auxiliary enterprise programs caused by the COVID-19 pandemic.

Chapter 56 of the Virginia Act of Assembly (FY21 & 22)

§ 3-4.01
3. Institutions of higher education shall have the authority to reduce the recovery of the full indirect cost of auxiliary enterprise programs to the educational and general program for the 2020-2022 biennium as a result of the significant financial impact on auxiliary enterprise programs caused by the COVID-19 pandemic.
4. a. Institutions of higher education shall have the authority to use available fund balances from other fund sources, to include educational and general program reserves, to support operations, increased costs or revenue reductions, for auxiliary enterprise programs for the 2020-2022 biennium. However, with the exception of transfer payments, educational and general program reserves may not be used to directly support intercollegiate athletics.
b. Any use of available fund balances pursuant to these temporary provisions shall be subject to approval by the Board of Visitors of the institution, provided that the Board has also reviewed the measures of financial status included in the most recent Auditor of Public Account Higher Education Comparative Report. Prior to any transfer, the institution shall provide the approval resolution to the Chairs of the House Appropriations and Senate Finance and Appropriations Committees.
Summary of APA Higher Education Comparative Report  
FY2017

Background

The Auditor of Public Accounts (APA) provides a report of comparative financial information for Virginia's 15 four-year public institutions. The report uses financial ratio analysis to provide starting point for understanding a university’s financial activity. The APA calculates financial ratios using each university's audited financial statements. These calculations exclude component units (such as affiliated not-for-profit foundations), and also exclude the impact of the university’s share of the commonwealth’s unfunded pension obligation (GASB 68) and Other Post-Employment Benefits (OPEB) (GASB 75), unless otherwise noted. The APA report is lengthy and so this summary was created to have a more concise document to review.

Ratio Analysis for Virginia Tech for fiscal year 2017

Financial Resource Ratios

Financial resource ratios focus on an institution’s available resources and the returns generated from those resources. They intend to answer whether institutions have sufficient resources and whether they use those resources to support the mission and strategic direction of the institution.

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Virginia Tech</th>
<th>Benchmark</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Reserve Ratio*</td>
<td>0.42</td>
<td>0.40</td>
<td>Higher</td>
</tr>
<tr>
<td>Viability Ratio*</td>
<td>1.17</td>
<td>1.00</td>
<td>Higher</td>
</tr>
<tr>
<td>Return on Net Position Ratio*</td>
<td>0.04</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Age of Facilities Ratio</td>
<td>13.78</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

* = Core Ratio

1) **Primary Reserve Ratio**: measures the financial strength of an institution by comparing expendable net position to total expenditures. The ratio improves if expendable net position increases or total expenditures decrease.

2) **Viability Ratio**: measures the availability of expendable net position to cover long-term debt. The ratio improves if expendable net position increases or long-term debt decreases.

3) **Return on Net Position Ratio**: measures the total economic return of an institution by comparing an institution's change in net position to its beginning net position. The ratio improves if total revenues increase or total expenditures decrease.

4) **Age of Facilities Ratio**: measures the approximate age of facilities by comparing the current year's depreciation expense to total accumulated depreciation. The ratio increases if depreciation expense decreases or total accumulated depreciation increases.
Activity-Based Ratios

Activity-based ratios analyze how an institution's activities relate to each other and how the institution allocates and prioritizes resources in achieving their missions.

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Virginia Tech</th>
<th>Benchmark</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational Core Services Ratio/(Relative % Distribution)</td>
<td>0.73/(81%)</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Educational Support Ratio/(Relative % Distribution)</td>
<td>0.10/(11%)</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>General Support Ratio/(Relative % Distribution)</td>
<td>0.07/(8%)</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Net Operating Revenues Ratio*</td>
<td>0.01</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Auxiliary Income Ratio</td>
<td>0.13</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

* = Core Ratio

1) **Functional Classification Ratios**: measures expenditures of certain functions as a percentage of an institution's educational and general (E&G) revenue.
   a. **Educational Core Services Ratio**: measures the proportion of instruction, research, and public service expenditures relative to E&G revenues. These functions are directly correlated to the institution's mission. The ratio increases if instructional, research, or public service expenditures increase or if E&G revenue decreases. Generally, higher percentages of core services indicate cost-efficient support programs.
   b. **Educational Support Ratio**: measures the proportion of academic support expenditures to E&G revenues. These expenditures relate directly to the institution's mission. The ratio increases if library, academic administration, admissions, registrar, or other academic support expenditures increase or if E&G revenue decreases.
   c. **General Support Ratio**: measures the proportion of institutional support expenditures relative to E&G revenues. These expenditures related indirectly to the institution's mission. The ratio increases if institutional support (day-to-day operations and business management) expenditures increase or if E&G revenue decreases.

2) **Net Operating Revenues Ratio**: measures operating performance and indicates whether an institution is living within its available resources. The ratio improves if noncapital net income increases relative to noncapital revenues.

3) **Auxiliary Income Ratio**: measures whether the revenues from auxiliary enterprises exceed the expenditures for those services. The ratio improves if auxiliary revenues increase or auxiliary expenditures decrease.
Composite Financial Index

The Composite Financial Index (CFI) combines four core ratios by assigning various weights to generate an aggregate score for financial strength and stability. This score provides an overview of the overall financial health of an institution. Due to the significant role foundations have in fundraising and endowment support, the APA provides a calculation of CFI with the affiliated not-for-profit foundation based on information from the Commonwealth' Comprehensive Annual Financial Report (CAFR).

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Virginia Tech</th>
<th>Benchmark</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFI – institution only</td>
<td>2.67</td>
<td>3.00</td>
<td>Lower</td>
</tr>
<tr>
<td>CFI – institution and foundation</td>
<td><strong>4.43</strong></td>
<td>3.00</td>
<td>Higher</td>
</tr>
</tbody>
</table>

Note to Reader: Due to a typographical error, the CFI - institution and foundation ratio on page 973 has been updated from 3.78 to 4.43 to match the APA report in Attachment C which begins on page 974.
EXECUTIVE SUMMARY

The purpose of this report is to provide comparative financial information for Virginia’s four-year public institutions of higher education. The citizens of the Commonwealth partially fund the operations of each of these institutions with taxes paid to the Commonwealth and through tuition and fees paid by Virginia residents attending each institution. The basic mission of each of these institutions, providing post-secondary education to students, is essentially the same. However, the methodology for accomplishing this mission differs among institutions. Some examples of these differences in approach include the incorporation of military training in the educational environment, engagement of professors and students in various levels of research activities, and the inclusion of institution health systems or hospitals as part of the university-entity. In addition, both the age and location of the institution can cause large financial and physical resource differences. For example, older institutions have had a longer time to build financial reserves and expand their physical footprints. Smaller institutions, which may be attempting to achieve faster rates of growth, may be investing more heavily in their facilities and capital projects. This growth could contribute to lower reserves and higher levels of expense relative to total assets.

To create this report, we primarily used amounts from state fiscal years 2015 through 2017, which covers the period from July 1, 2014, to June 30, 2017. We derived most of the information from the institutions’ individually published financial statements and footnotes. Annually, the Auditor of Public Accounts audits each of these institutions’ financial statements and provides an opinion on the fairness of the presentation of each.

Although there are significant differences in how each institution operates, ratio analysis provides a methodology for beginning to understand the differences in financial activity at each institution and how changes in activity can be a reflection of each institution’s operating philosophy. In addition, as this report will be an ongoing analysis over time, future reports will continue to compare each institution’s ratios to those of previous years. Trend analysis will provide a well-rounded comparison of each institution’s figures to its own financial statements in previous years as well as to those of other institutions and attempt to show the impact of micro and macroeconomic shifts on the operations and financial stability of Virginia’s public four-year institutions of higher education.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXECUTIVE SUMMARY</td>
<td></td>
</tr>
<tr>
<td>BACKGROUND</td>
<td>1-4</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>4</td>
</tr>
<tr>
<td>RATIOS AND ANALYSIS</td>
<td>5-20</td>
</tr>
<tr>
<td>TRANSMITTAL LETTER</td>
<td>21</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>22-23</td>
</tr>
<tr>
<td>APPENDIX: INSTITUTION BACKGROUND INFORMATION</td>
<td>24-28</td>
</tr>
<tr>
<td>APPENDIX: CONDENSED FINANCIAL INFORMATION</td>
<td>29-30</td>
</tr>
</tbody>
</table>
BACKGROUND

The Commonwealth of Virginia has 15 four-year, public institutions of higher education as listed in Table 1 below. The basic mission of these institutions is to provide post-secondary education; however, the institutions can vary drastically based on several factors. Some of these factors include the age of the institution, the size of its endowments, and the setting in which it provides higher education. For instance, Virginia’s institutions range in age from just over 50 years old to over 320 years old. The size of each institution’s endowment ranges from the tens of millions to just over $6 billion. The Appendix: Institution Background Information includes additional biographical information regarding Virginia’s public four-year institutions. A comparative financial analysis of these institutions must consider a variety of factors including size, age, and type of institution.

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNU</td>
<td>Christopher Newport University</td>
</tr>
<tr>
<td>CWM</td>
<td>The College of William and Mary in Virginia</td>
</tr>
<tr>
<td>GMU</td>
<td>George Mason University</td>
</tr>
<tr>
<td>JMU</td>
<td>James Madison University</td>
</tr>
<tr>
<td>LU</td>
<td>Longwood University</td>
</tr>
<tr>
<td>NSU</td>
<td>Norfolk State University</td>
</tr>
<tr>
<td>ODU</td>
<td>Old Dominion University</td>
</tr>
<tr>
<td>RU</td>
<td>Radford University</td>
</tr>
<tr>
<td>UMW</td>
<td>University of Mary Washington</td>
</tr>
<tr>
<td>UVA</td>
<td>University of Virginia</td>
</tr>
<tr>
<td>UVA-Wise</td>
<td>University of Virginia's College at Wise</td>
</tr>
<tr>
<td>VCU</td>
<td>Virginia Commonwealth University</td>
</tr>
<tr>
<td>VMI</td>
<td>Virginia Military Institute</td>
</tr>
<tr>
<td>VT</td>
<td>Virginia Polytechnic Institute and State University</td>
</tr>
<tr>
<td>VSU</td>
<td>Virginia State University</td>
</tr>
</tbody>
</table>

Endowments are donations of money or property, which provide ongoing support for an organization. Institutions typically invest these funds and use the income and/or principal from those investments to support the institutions in accordance with the donors’ wishes. The original donation is typically not spendable, which allows for the continued earning of income to support future operations of the institution. Some institutions invest endowment funds directly, while affiliated university not-for-profit foundations primarily hold and invest endowment funds for other institutions. An understanding of how Virginia’s public institutions operate, at a minimum, must consider the size of the institutions and the institutions’ endowments. For purposes of this study, to obtain endowment asset amounts, we used self-reported data from each of the institutions to the National Association of Colleges and University Business Officers (NACUBO) Commonfund Study of Endowments (NCSE) as of fiscal year 2017, which was the latest data available at the time of our study. CNU and LU did not participate in the 2017 NCSE, and as such, we obtained their most recently submitted endowment data from the Integrated...
Postsecondary Education System (IPEDS). We obtained full-time equivalent enrollment information from the State Council for Higher Education in Virginia (SCHEV).

According to the NCSE, the average endowment of institutions who participated in their latest study (809 institutions nationwide for fiscal year 2017) was about $704.5 million with a median endowment of $130.9 million; however, these averages include both public and private institutions. When considering public institutions alone, as in this comparative study, the average endowment per institution decreased to $476.3 million with a median endowment of $106.2 million. Based on an analysis of institutions submitting data to the NCSE, the average endowment for Virginia public institutions of higher education was $923.3 million, with a median endowment of $153.4 million. As noted in Table 2 below, four of Virginia’s 15 public four-year institutions have endowments larger than the national average for public institutions, while six of Virginia’s 15 institutions exceed the national median for endowment assets based on the information reported to the NCSE. Using NCSE data for institutions reporting enrollment statistics, the average endowment per full-time equivalent student for public four-year institutions nationally is $22,471 with a median endowment per full-time equivalent student of $9,423. The average endowment per full-time equivalent student for Virginia’s public four-year institutions reporting to the NCSE is $53,130 with a median endowment per full-time equivalent student of $10,834. This was the most current endowment-per-student data available at the time of this report. Although some institutions may not exceed national averages, many different factors contribute to the size of an institution’s endowment including the age of the institution, the alumni base and the pace at which they provide donations, the success of the endowment investment managers, and annual endowment spending percentages.

Table 2. Institution Endowment Data

<table>
<thead>
<tr>
<th>Classification</th>
<th>Institution</th>
<th>FY17 Endowment (in millions)</th>
<th>Fall 2016 FTE Enrollment</th>
<th>Endowment per FTE Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest Research</td>
<td>GMU</td>
<td>$77.7</td>
<td>$29,377</td>
<td>$2,645</td>
</tr>
<tr>
<td>Highest Research</td>
<td>UVA</td>
<td>6,400.0</td>
<td>24,329</td>
<td>263,061</td>
</tr>
<tr>
<td>Highest Research</td>
<td>VCU</td>
<td>1,840.0</td>
<td>28,496</td>
<td>64,570</td>
</tr>
<tr>
<td>Highest Research</td>
<td>VT</td>
<td>995.8</td>
<td>33,675</td>
<td>29,571</td>
</tr>
<tr>
<td>Highest Research</td>
<td>CWM</td>
<td>874.1</td>
<td>8,610</td>
<td>101,521</td>
</tr>
<tr>
<td>Higher Research</td>
<td>JMU</td>
<td>93.1</td>
<td>20,837</td>
<td>4,468</td>
</tr>
<tr>
<td>Higher Research</td>
<td>ODU</td>
<td>213.5</td>
<td>20,031</td>
<td>10,658</td>
</tr>
<tr>
<td>Master’s and Baccalaureate</td>
<td>CNU</td>
<td>24.1</td>
<td>4,986</td>
<td>4,834</td>
</tr>
<tr>
<td>Master’s and Baccalaureate</td>
<td>LU</td>
<td>51.8</td>
<td>4,705</td>
<td>11,010</td>
</tr>
<tr>
<td>Master’s and Baccalaureate</td>
<td>NSU</td>
<td>19.5</td>
<td>4,800</td>
<td>4,063</td>
</tr>
<tr>
<td>Master’s and Baccalaureate</td>
<td>RU</td>
<td>50.1</td>
<td>9,165</td>
<td>5,466</td>
</tr>
<tr>
<td>Master’s and Baccalaureate</td>
<td>UMW</td>
<td>47.9</td>
<td>4,296</td>
<td>11,150</td>
</tr>
<tr>
<td>Master’s and Baccalaureate</td>
<td>VMI</td>
<td>435.1</td>
<td>1,953</td>
<td>222,785</td>
</tr>
<tr>
<td>Master’s and Baccalaureate</td>
<td>VSU</td>
<td>36.1</td>
<td>4,505</td>
<td>8,013</td>
</tr>
</tbody>
</table>
For purposes of this report, data presented for UVA includes UVA-Wise, as the institutions present consolidated financial statements for reporting purposes. For the same reason, CWM includes Richard Bland College, Virginia’s only junior college, as the institutions report to the same governing body and present consolidated financial statements for financial reporting purposes. The Virginia Community College System (VCCS) is not included in the comparative analysis, as this report does not intend to compare financial information of four-year institutions to financial information of the Commonwealth’s two-year institutions. The VCCS consists of 23 individual community colleges located throughout the Commonwealth of Virginia. The institutions that comprise the VCCS do not offer Bachelor’s Degrees; instead, they typically provide two-year Associate Degrees and certificates. With over 40 campuses and a total full-time equivalent student population of 105,242 as of the 2016-2017 academic year,² it is difficult to provide a direct comparison between the VCCS and the Commonwealth’s four-year institutions. With the exception of VMI and UVA-Wise, all of Virginia’s four-year higher education institutions operate graduate programs with varying degree options. For the purposes of this report, we will refer to the universities as institutions even though some use “college” or “institute” as part of their formal name.

In addition to size of the institution and available resources, certain differences in organizational structure can impact comparability of financial information performed in this report. For example, the University of Virginia Medical Center (UVA Medical Center) is a division of UVA and accounting standards require the inclusion of its financial information with the financial activity of the UVA’s academic division. In contrast, accounting standards require reporting the VCU Health System Authority, a component unit of VCU, in a separate column alongside the institution’s information. For purposes of this report, we will use financial information of the primary university entity consistent with the presentation in the independently published financial statements of each institution. Except as otherwise noted, UVA Medical Center’s financial information will be combined with UVA, but the VCU Health System Authority will not be included with the information presented for VCU.

In most cases, the institutions present financial information pertaining to their non-profit foundations either alongside or immediately following the institution’s financial information. However, foundations support the institutions in different ways. For consistency throughout the remainder of this report, unless otherwise noted, we have included only the financial information of the institution and have excluded that of the institution’s respective foundations. It is important to note, however, that higher education foundations exist primarily to support the mission of the corresponding institution of higher education and will use their resources for various purposes to benefit the institution. In most cases, including foundation resources would significantly improve the financial position of each institution beyond what this report shows.

To aid in comparability among higher education institutions, we referred to four basic classifications prescribed by the Carnegie Foundation for the Advancement of Teaching.³ These Carnegie classifications include doctoral or research institutions (highest research activity, higher research activity, moderate research activity), master’s (larger programs, medium programs, and smaller
programs), and baccalaureate colleges. We have classified Virginia’s state-supported institutions into three broad categories based on the above classifications: research institutions with the highest research activity, research institutions with higher research activity, and master’s and baccalaureate institutions. These classifications take into account research and development spending, science and engineering research staff, doctoral conferrals, program size, and number of master’s degrees awarded. The assumption is that institutions with similar levels of research activity and similar degrees awarded operate more similarly to each other than to other institutions outside of their assigned classification. Institutions operating similarly are likely to be more comparable in types and levels of expenses and investments. Research institutions with the highest research activity include GMU, UVA, VCU, and VT. Research institutions with higher research activity include CWM, JMU, and ODU. The master’s and baccalaureate institutions include CNU, LU, NSU, RU, UMW, VMI, and VSU.

INTRODUCTION TO FINANCIAL ANALYSIS

Ratios are quantitative relationships between two amounts showing the number of times one value (denominator) is contained within the other (numerator). This report uses several ratios to compare balances and activities within institution financial statements. Ratios help to provide relative comparability of each institution’s activities, financial performance, and reserves rather than comparing total dollar values from one institution to the next. The tables, charts, and graphs below show summarized financial health and performance by assigned classification for the institutions. The Appendix: Condensed Financial Information provides additional detailed information for each institution.

Starting in fiscal year 2015, new accounting standards significantly affected financial information of each institution of higher education in Virginia. These standards require each institution to record a liability representing the institution’s share of the Commonwealth of Virginia’s overall net pension liability for employee pension benefits. Before these standards, it was uncommon for institutions to show a negative balance in unrestricted net position. However, following the implementation of the standards, only a few institutions continued to have a positive balance for this net position classification. As some uncertainty remains as to the best way to account for the impact of these new standards within the traditional ratio analysis model, we opted to exclude the impact from the ratios presented in this report. As these standards affect all institutions, we believe the exclusion of these liabilities should not significantly impact the comparability of ratios from one institution to another.
RATIOS AND ANALYSIS

Financial Resource Ratios

The financial resource ratios focus on available resources and the returns generated from those resources. They intend to answer whether institutions have sufficient resources and whether they use those resources to support the mission and strategic direction of the institution.

Primary Reserve Ratio

The Primary Reserve ratio measures the financial strength of an institution by comparing expendable net position to total expenses. Expendable net position consists of resources the institution can access in a short amount of time to satisfy obligations. Expendable net position excludes an institution’s net investment in capital assets and other nonexpendable net position elements. Resources considered nonexpendable are generally not available to satisfy obligations unless the institution satisfies specific restrictions. For example, institutions do not generally sell their capital assets to cover obligations, except in extreme circumstances, and as such, resources invested in capital assets do not meet the liquidity requirement used in this ratio. A high Primary Reserve ratio indicates an institution can withstand times of economic downturn, decreases in enrollment, decreases in fundraising activities, or inability to secure debt. A low ratio indicates that during an economic downturn, an institution could encounter difficulty meeting its obligations. The ratio also indicates the length of time an institution could continue operations without additional revenue or support. In other words, the Primary Reserve ratio provides a snapshot of the financial strength and flexibility of an institution. A ratio of 1.0 generally indicates an institution could continue to meet obligations for a year without additional revenue, increased state appropriation support, or short-term borrowing. The accepted benchmark for this particular ratio is 0.40.

As seen in Figure 1, UVA’s high Primary Reserve ratio of 1.90 in fiscal year 2017 is largely due to its significant investment and restricted, but expendable, funds. Investments comprise 62.7 percent of UVA’s total assets and UVA’s investments are reported as those held by the institution itself, whereas many other institutions consolidate giving and investment activities with their non-profit foundations. In contrast to UVA, where investments comprise a majority of the total assets, capital assets comprise the majority of total assets for both NSU and UMW. NSU and UMW’s capital assets comprise 87.2 percent and 91.8 percent of total assets, respectively. When capital assets represent a large percentage of total assets, it limits the amount of expendable and unrestricted assets available to satisfy obligations. Additionally, capital expansion can temporarily cause the Primary Reserve ratio to decline. As such, it is important to view this ratio and others over time to account for periods of expansion.
Both RU and VMI at 0.44 and 0.39, respectively, have significant Primary Reserve ratios relative to their peers, which result from lower debt levels and more liquid assets than other institutions. For example, RU’s cash, cash equivalents, and investments represent 22.6 percent of its total assets compared to an 8.7 percent average for the remaining institutions in the master’s and baccalaureate institution classification. In contrast, VMI’s total liabilities of $67.4 million represent just 17.1 percent of its total assets compared with an average of 44.6 percent for the remaining institutions in the classification. Although the institutions have chosen different strategies for their institutions, the result for both institutions is the accumulation of significant reserves of expendable resources. However, as noted previously, the Primary Reserve ratio for institutions directing endowment and investment activities toward not-for-profit foundations rather than to the institution directly is lower than when including those expendable resources held by the foundation for the direct benefit of the institution.

**Figure 1. Primary Reserve Ratio**

![Primary Reserve Ratio Chart]

**Viability Ratio**

The Viability ratio measures one of the most basic determinants of clear financial health: the availability of expendable net position to cover long-term debt should the institution need to settle its obligations as of the statement of net position date. What this indicator tells the institution is that they either can or cannot settle long-term debt obligations as of the statement of net position date with expendable net position available. This ratio also indicates whether an institution can assume new debt. Although the institution will receive more funds as it continues to operate past the balance sheet date, this ratio is a good indicator of whether the existing debt assumed exceeds a level the institution can
afford to pay. A benchmark ratio of 1.0 or greater indicates sufficient expendable resources to cover outstanding debt obligations.  

Figure 2 shows each institution’s Viability ratio compared with average Viability ratio by institution type. For comparison purposes, we excluded UVA’s Viability ratio from the average Viability ratio calculation of the highest research institutions, as it is a clear outlier when compared with all other institutions due to the size of its expendable endowment and investment resources. To varying degrees, some institutions have directed giving activities toward not-for-profit foundations, which can deflate the expendable resources shown on the Statement of Net Position and deflate the Viability ratio. In addition, the extent to which an institution has arrangements with a not-for-profit affiliated foundation to provide resources to service long-term debt, these types of arrangements improve the viability of the institution, but the Viability ratio is unable to capture the impact. The chart below shows the Viability ratio of each institution when excluding the impact of pension accounting standards.

**Figure 2. Viability Ratio**

The institutions with the highest ratios over a baseline ratio of 1.0 are UVA (4.01), RU (1.65), VMI (1.55) and VT (1.17). The institutions with the lowest ratios include CNU (0.11), NSU (0.15), and UMW (0.04). UVA’s much larger Viability ratio is primarily due to a large amount of cash equivalents and investments at its disposal as expendable resources. As already noted above, UVA’s endowment and other investments make up a significant portion of its total assets. GMU has a lower Viability ratio than others classified as highest research institutions due to its significant investment in capital assets and corresponding long-term debt obligations incurred to finance those assets. GMU’s capital assets comprise approximately 75.1 percent of total assets and, as noted above, the Viability ratio does not consider capital assets to be expendable resources available to settle obligations. The Age of Facilities ratio shown later in this report corroborates this assessment, as GMU’s facilities are younger in age than the other institutions in the highest research category. Institutions in the higher research category remain somewhat consistent in viability as they maintain similar proportions of expendable assets to
liabilities. VMI’s Viability ratio is larger than most other institutions in the master’s and baccalaureate category as it has a lower debt load relative to total assets. Similarly, as noted in the Primary Reserve ratio discussion, RU’s sizeable cash and cash equivalent balances have a similar impact in increasing its Viability ratio. UMW has a lower Viability ratio than others in the master’s and baccalaureate category primarily due to fewer expendable resources available to pay long-term debt obligations. UMW’s capital assets represent approximately 92 percent of total assets, leaving limited assets in expendable resources prior to considering liabilities. Additionally, UMW’s total liabilities represent 54.7 percent of total assets, which is roughly ten percent higher than other institutions in the master’s and baccalaureate classification.

A year-to-year comparison of Viability ratio is helpful to show trends at the individual institution level and across the various classifications of institutions. In some cases, the Viability ratio may experience a temporary decrease because of institution growth initiatives. For example, construction of a new building may result in an increase in debt, which may further constrain existing expendable resources. While these types of activities may temporarily decrease the Viability ratio for a particular institution, the ratio should trend upwards over the long term. Figure 3 shows a side-by-side analysis of fiscal year 2015 through 2017 Viability ratios for each institution. As noted, some institutions experienced small declines, while VMI notably experiences a large increase from 1.13 as of fiscal year 2016 to 1.55 as of fiscal year 2017, primarily due to an increase in assets and a corresponding decrease in liabilities, resulting in a year over year increase in expendable net position.

**Figure 3. Viability Ratio Trends**
Another measurement of an institution’s operating performance is the Return on Net Position ratio, which measures total economic return. This ratio considers all forms of revenue and expense for a given fiscal year compared to the institution’s net position by dividing the change in net position by the total beginning net position. In general, a higher return on net position indicates a stronger year of financial performance. An institution with less long-term debt generally has a higher return on net position. Several different factors can impact this ratio, including periods of capital expansion or periods of high investment returns. There is generally not a fixed benchmark to apply or achieve for this ratio; however, institutions often look to make this ratio positive and improve over time.

### Figure 4. Return on Net Position Ratio

As seen in Figure 4, GMU and NSU have the highest Return on Net Position ratios at 0.16 and 0.15, respectively, while LU has the lowest ratio at -0.04 for fiscal year 2017. GMU’s higher ratio is due to a smaller operating loss during fiscal year 2017 relative to peer institutions and significant capital appropriations and capital grants and contributions, which resulted in a larger increase in net position relative to total net position at the beginning of the year. Capital contributions increase the volatility in this ratio from year to year, as institutions record revenue in a given year when the Commonwealth
provides capital funding for selected projects; however, an institution may not receive funding every year. NSU’s Return on Net Position ratio also increased significantly from fiscal year 2016 to fiscal year 2017. The primary reason for the increase appears to be a decrease in the institution’s operating loss from fiscal year 2016 to 2017 and an increase in funding from state general fund appropriations and capital appropriations. The three-year downward trend in the ratios for RU and VSU further illustrates the impact of capital activity on these ratios, as both institutions experienced decreased capital appropriation support during fiscal year 2017 relative to previous fiscal years. LU experienced an overall decrease in operating revenues from fiscal year 2016 to 2017 and an increase in operating expenses resulting in a year over year increase in net operating loss. Additionally, as revenues from state appropriations and capital appropriations were not sufficient to offset the increase in operating loss, the institution experienced a decline in overall net position for fiscal year 2017. Like many institutions, the decrease in operating revenue is partially the result of declines in enrollment following the increases in enrollment during the recent nationwide recession. However, the increase in operating expenses is primarily due to the Vice Presidential debate, which LU hosted prior to the 2016 Presidential election.

Age of Facilities Ratio

The Age of Facilities ratio is a comparison of the current year’s depreciation expense for buildings, infrastructure, and improvements compared to the total accumulated depreciation for those asset categories. This ratio provides an approximate average age of facilities in years by dividing the accumulated depreciation by the current year’s expense. This is an important ratio to take into consideration because this ratio can be an indicator of future building, infrastructure and maintenance needs. In general, a higher Age of Facilities ratio represents a greater immediate need for facility improvements. In Figure 5 below, we see a comparison of the Age of Facilities ratio across institutions, grouped according to institution classification.

Figure 5. Age of Facilities Ratio (in years)
Figure 5, shows the highest and lowest Age of Facilities ratios are ODU (17.89) and CNU (8.94). Many different factors affect this ratio—the most prevalent of which is investment in capital assets. Based on review of CNU’s capital asset activity, the institution added $28.2 million in building and infrastructure capital assets in fiscal year 2017 and had approximately $24 million in ongoing capital projects at fiscal year end. CNU is the youngest comprehensive institution in the Commonwealth as they were part of CWM until 1977 and gained university status in 1992. Therefore, CNU’s expansion and investment in capital assets is consistent with a younger, growing institution. GMU’s long-term liabilities, excluding pension liabilities, are the highest relative to total assets of the institutions included in the highest research institution classification at 38.0 percent. This indicates GMU’s relative debt load compared with the other institutions is higher and helps to explain the lower Age of Facilities ratio as it has been building a higher proportion of new buildings than the other institutions over the last several years.

The extent to which the institution relies upon its foundation to finance capital projects may also impact this ratio. In many cases, an institution enters into operating leases with a related foundation or other entity to rent space. For example, as of the end of fiscal year 2017, ODU had future minimum rental payments of $33.9 million under leases for equipment and space, while CWM only reports $7.3 million in future rental payments as of this date. As operating leases may result in the use of new space, but not the recording of a newer asset on the Statement of Net Position, the use of operating leases can result in a higher Age of Facilities ratio relative to other institutions. Additionally, the geography or geographical location of an institution’s main campus may also impact its ability to construct new assets, particularly if land is limited based on the location of the campus in a major city.

**Activity-Based Ratios**

Below is an analysis of how activities of the institution relate to each other and are comparisons of activities in the institutions’ respective statements of changes in revenues, expenses and changes in net position. These ratios provide information on how the institutions allocate and prioritize resources in achieving their missions.

**Functional Classification Ratios**

We consider Educational Core Services, Educational Support, and General Support ratios to be Functional Classification ratios. Institution financial statements typically group expenses by the various functions of the institution. These ratios show expenses of certain functions as a percentage of an institution’s educational and general (E&G) revenue. For the purposes of this analysis, education and general revenue includes operating revenue, excluding patient services and auxiliary revenue, and including Pell grant and state appropriation revenue. The Educational Core Services ratio includes expenses related to instruction, research, and public service functions. The Educational Support ratio includes academic support and student services functions and the General Support ratio consists of expenses for institutional support...
functions. The operating expense classifications included in the institutions’ financial statements, but not included in these ratios are operation of plant, student aid, auxiliary services, depreciation, patient services, and other. Figure 6 below shows a compilation of each institutions’ Functional Classification ratios, taken from the individual institutions’ financial statements.

**Figure 6. Combined Functional Classification Ratios**

![Combined Functional Classification Ratios](attachment:C)

All institutions spend more on educational core services, educational support, and general support than they receive through operating revenue. As a result, institutions use non-operating revenue, specifically state appropriations, gifts, and non-operating grants and contracts, such as Pell grant revenue, to cover these expenses. The Functional Classification ratios presented account for the use of Pell grant revenue and state appropriations to support operating expenses, but do not include the impact of gifts or investment revenues on spending. Both UVA and VMI have combined ratios that exceed 1.0, indicating that educational core services, educational support, and general support spending exceeds the resources provided from state and federal entities and tuition and fees generated from student enrollment. Both institutions have significant endowments and revenues received from gifts, which provide funds to support institution operations. As a result, the institutions can use those resources to supplement state and federal resources and increase spending when compared to other institutions.
Educational core services (instruction, research, and public service) are directly correlated to the mission of the institution. Figure 7 above shows the breakdown of institutional spending as a percentage of operating and nonoperating revenues excluding gifts and investment income. VT spends just over 80 percent of these revenue sources on educational core services and correspondingly smaller percentages on educational support and general support. UVA spends approximately 70 percent of these revenues on educational support services, but in absolute terms UVA spends more on educational core services and has a higher Educational Core Services ratio than any other institution (0.75). Analyzing this ratio by institutional classification is most appropriate as each grouping of institutions varies in how it accomplishes its institutional mission; for example, highest research activity institutions spend much more on research activities than master’s and baccalaureate institutions. Highest research activity institutions will generally have higher educational core service expenses and ratios due to the emphasis on research activity. Research expenses total approximately 17.4 percent of all operating expenses, when excluding hospital operations, for these institutions compared to 5.1 percent for institutions with higher research activity and 1.93 percent for master’s and baccalaureate institutions. ODU spends 2.7 percent of total operating expenses on research; however, this amount appears artificially low because ODU’s research activity runs primarily through the ODU Research Foundation. As the ODU Research Foundation spent $46.4 million on research during fiscal year 2017, including these expenses would result in a larger percentage of total expenses allocated to research increasing the institution’s Educational Core Services ratio. Additionally, public service expenses are comparable as a percentage of total expenses across all institutions, with small outliers in public service expenses at VT and VSU due to their agricultural extension offices. Instruction expenses for all institutions exceed 24 percent of operating expenses, excluding hospital operations at UVA and VCU. All institutions in the highest research and higher research classifications spend more on instruction than any other category as a percentage of total operating expenses. In the master’s and baccalaureate classification, institutions generally spend the most on instruction; however, CNU, LU, and VMI spent more on auxiliary
enterprises, such as housing and dining, as a percentage of total operating expenses than any other expense category.

Educational support expenses are supplemental, but necessary, expenses that relate to the mission of the institution. These include expenses such as libraries, academic administration, admissions and registrar’s offices, and financial aid. UVA’s educational support ratio exceeds the average for the highest research activity institutions due to higher spending on academic support and student services. UVA spent 10.35 percent of total expenses excluding hospital expenses on academic support and 2.99 percent on student services. VT has a ratio that is below the mean for highest research activity institutions due to lower academic support expenses as a percentage of total expenses (6.41 percent) relative to peer institutions. Institutions in the higher research activity are comparable in relative spending on academic support and student services as a percentage of total operating expenses. The master’s and baccalaureate institutions vary the most with VMI having the highest ratio and VSU having the lowest. VMI has a higher Educational Support ratio due to higher overall spending relative to state and federal resources received as noted in Figure 6 above. VSU has a lower ratio as it allocates less to academic support and receives more federal grants and contracts than the other institutions in the category, resulting in higher research spending. This additional spending on research activities deflates percentages in other functional classifications as a percentage of total operating expenses.

General support expenses indirectly relate to the mission of the institution, and are directly related to the day-to-day operations or business management of the institution. Examples of these expenses include fiscal operations, security, fundraising, and legal services. VT and GMU have lower ratios than other institutions due to lower spending on institutional support, ranging from five to six percent of total expenses. RU’s ratio is slightly higher than peer institutions in its classification due to higher overall spending on institutional support (11.09 percent) relative to the average of its peer institutions (9.00 percent). VMI’s spending is lower than the average of its peer institutions at 7.24 percent of total expenses; however, VMI generates a much larger percentage of total revenues from gifts at 17.88 percent compared with an average of 2.05 percent of total revenues from gifts for all other institutions, resulting in a slightly higher ratio. As these ratios are a function of spending compared to revenue sources like state appropriations, tuition and fees, and Pell grant revenue, VMI’s ratios will appear larger than other institutions as state and federal revenue sources are a relatively smaller portion of its total revenues and spending is higher due to the significant percentage of gifts received by the institution.
Net Operating Revenues Ratio

The Net Operating Revenues ratio measures the operating performance of institutions and indicates whether an institution is living within its available resources. This ratio compares net income excluding capital revenues to the sum of total noncapital revenues. Operating revenues include student tuition, grants and contract revenue, sales and services of educational departments, auxiliary services, and other operating revenues. Nonoperating revenues include state appropriations, Pell grants, investment income, and gift revenue. Within Figure 8 below, we see a comparison of each institution’s Net Operating Revenues ratio over the last three fiscal years compared to those of their peers within the respective classifications.

Figure 8. Net Operating Revenues Ratio

The highest and lowest Net Operating Revenues ratios are those of UVA (0.14) and LU (-0.15). The large change from year to year at UVA is primarily due to performance of its sizeable endowment and investment portfolio, which sustained losses during fiscal year 2016, but recovered for significant gains during fiscal year 2017. The nature of investing activities can result in significant volatility in this ratio and contributes to the need to analyze the results of this ratio over several fiscal years. Additionally, capital related revenues excluded from the ratio include maintenance reserve funds provided by the Commonwealth. The exclusion of these revenues artificially lowers the Net Operating Revenues ratio as the net income used in the numerator includes the related maintenance reserve expenses. As noted in the Return on Net Position ratio, LU experienced a decline in enrollment and operating revenues and an increase in operating expense during fiscal year 2017. As the ratio is a measure of total surplus/deficit...
Comparative Report as of Fiscal Year 2017

to total noncapital revenues, any decrease in revenue and increase in deficit will result in a noticeable decrease in the ratio. Several other institutions show negative ratios for all three fiscal years; however, in most cases, these ratios improved from fiscal year 2015 through 2017. NSU’s ratio notably improved due to a narrowing of its operating loss and increased support from nonoperating revenue sources. Additionally, except for LU, net position increased for all institutions after the inclusion of capital-related revenues, like capital appropriations and capital gifts and grants. The primary explanation for the decline in LU’s ratio is additional one-time expenses from hosting the 2016 Vice Presidential debate.

Auxiliary Income Ratio

The Auxiliary Income ratio intends to show whether the revenues in support of auxiliary enterprises exceed the expenses for those services. Auxiliary services are all those not related to an institution’s core educational objectives and include housing, food services, bookstore operations, parking, and others. These enterprises do not receive state general fund support and should be self-sustaining in that the revenues they earn should equal or exceed the expenses. It is important to note that donors often restrict gifts given to institutions to be used for athletics and other auxiliary activities. As institutions receive donations restricted to auxiliary activities and earn auxiliary income, cash reserves can affect activities in the current period under analysis. Institutions with larger auxiliary cash reserves have more flexibility to set and adjust fees for auxiliary services than institutions relying on current period auxiliary income, such as student fees. Figure 9 below shows the Auxiliary Income ratio over a three-year period across institutions by classification. This measure compares auxiliary income to the amount of net auxiliary revenue.

Figure 9. Auxiliary Income Ratio

The Auxiliary Income ratio shows the extent to which auxiliary services are self-sustaining.
The highest and lowest Auxiliary Income ratios are GMU and NSU, which are 0.31 and -0.32, respectively. Although some institutions have negative auxiliary ratios and negative income in the area of auxiliaries services, this can indicate when an institution elects to use its auxiliary reserve funds or significant resources from endowments, gifts, or other investments to support auxiliary services as opposed to increasing fees for these types of services. Declines in enrollment can also result in significant swings in the Auxiliary Income ratio, particularly if expenses do not decline at the same rate as reduced auxiliary revenues from student fees. For example, NSU experienced significant declines in full-time equivalent enrollment from fiscal year 2013 through fiscal year 2016, with a slight increase in enrollment in fiscal year 2017, and relied on auxiliary reserves over the last several fiscal years to close budget gaps created by declining student enrollment.\(^7\) UVA and VMI rely heavily on contributions from individuals and affiliated foundations to aid in funding their athletic budget. As accounting standards require these items to be recorded in the Statement of Revenues, Expenses, and Changes in Net Position as nonoperating revenues, rather than auxiliary revenues, the ratio of auxiliary income to auxiliary revenue is artificially deflated and will likely continue to appear negative as a result of this accounting treatment and institutions’ operating philosophy. Of the institutions with negative ratios, only LU’s ratio moved from positive to negative during fiscal year 2017. A review of the institution’s revenues and expenses show a slight decrease in revenues consistent with the institution’s decline in enrollment noted previously and a large increase in auxiliary expenses. The large increase in expenses relates primarily to hosting the 2016 Vice Presidential debate and increased residential services expenses due to the opening of two new dorms during the fiscal year.

*Composite Financial Index (CFI)*

The Composite Financial Index or CFI combines four core ratios by assigning various weights to generate an aggregate score for financial strength and stability. These ratios: Primary Reserve ratio, Viability ratio, Net Operating Revenues ratio, and Return on Net Position ratio provide for an understanding of the institutions’ available resources and results of current operations, which when applied to certain benchmark factors generates a score from one to ten indicating strength of the institution. A score close to one indicates that the institution may be very light on expendable resources and have difficulty meeting operating demands in the current environment. On the contrary, a score of ten indicates that an institution has significant financial flexibility and is operating well within its means. A benchmark score of three generally indicates that an institution is financially healthy.\(^5\) In the event that a specific ratio is negative for an institution, the calculation uses a strength score of zero for that particular ratio, rather than using a negative number to avoid calculating a negative CFI score.
As with other ratios, it is important to recognize that absolute comparisons between institutions are not usually appropriate. Each institution has different needs, both capital and operational, that may result in short-term increases or decreases in the CFI to fulfill programmatic requirements and the institution's strategic plan. Reviewing trends in the CFI over time helps to adjust for the impact of significant one-time events that may disproportionately impact a ratio in a given fiscal year. Similar to the ratios that comprise the CFI, UVA shows its relative financial strength and flexibility with a calculated CFI of 8.63 compared with an average and median CFI of 4.46 and 3.27, respectively, for the institutions with the highest level of research activity. However, it should be noted that the CFI’s for the other institutions in this classification are either slightly above or below the benchmark ratio of 3.0, indicating relatively strong overall financial health. Institutions in the higher research classification are similar with an average and median CFI that approximate each other. ODU’s CFI of 2.09 is the highest in the group, with JMU and CWM consistently above 1.0. In the master’s and baccalaureate classification, the CFI scores range from 0.24 for UMW to 2.90 for RU. Four institutions exceeded the average CFI for the classification during fiscal year 2017 with VMI and RU exceeding the benchmark ratio of 3.0 in two of the last three fiscal years, while falling slightly below for the third year. UMW’s CFI ranged from a high of 0.54 in fiscal year 2015 to a low of 0.15 in fiscal year 2016 before rebounding slightly to 0.24 during fiscal year 2017. Despite the low ratio, UMW has seen an increase in its Primary Reserve ratio and Viability ratio over the last three fiscal years, which indicates the institution’s financial flexibility may be improving. LU’s dip in the CFI during fiscal year 2017 appears primarily the result of one-time outflows supporting the 2016 Vice Presidential debate, which resulted in a net decrease in net position from fiscal year 2016 to fiscal year 2017.
It is important to note that the degree to which institutions use foundations for fundraising and endowment support can have a tremendous impact on the CFI. Although the various ratios in this report do not reflect the financial information of the not-for-profit foundations of the Commonwealth’s four-year institutions of higher education, the Commonwealth’s Comprehensive Annual Financial Report (CAFR) prepared by the Department of Accounts each year does allow for a general calculation of CFI for the combined University/Foundation entity. Although the CAFR is not as detailed as each institution’s individually published financial statements, there is sufficient information to perform a quick calculation of CFI using the same framework as noted above for each individual institution.

Figure 11 below reflects CFI for the combined University/Foundation enterprise. Formulas for ratios used in the combined CFI calculation are generally consistent with the CFI calculation shown for the institution as a standalone entity in Figure 10; however, the Viability ratio calculated for the combined entity uses total long-term liabilities rather than long-term debt in the denominator. This relative difficulty in obtaining detailed comparable data for long-term debt of the consolidated higher education entity from the CAFR is the reason for this variation. As a result, the CFI scores shown below are likely lower than they otherwise would be when excluding long-term liabilities other than long-term debt. Regardless, the ratios provide a relative understanding of the impact of foundations and affiliated organizations on the financial health of the combined enterprise.

Figure 11. Composite Financial Index (CFI) including Foundations

Certain entities experience a significant increase in CFI when adding the financial activity of their respective foundations into the calculation. VMI’s CFI increases from 2.76 to 8.39, representing the largest increase in CFI under the combined calculation. This increase is primarily the result of the large endowment held with the VMI Foundation, which is one of the largest for public institutions in the United States when considering endowment funds per full-time equivalent student. CWM also experiences a significant increase in CFI due to the size of the endowment held by its affiliated foundations, primarily the College of William and Mary Foundation. Lastly, VCU’s CFI increases due to improvement in all ratios...
supporting the CFI calculation due to the addition of its foundations, but also the activity of the VCU Health System Authority. Several institutions experience slight decreases in the CFI score after adding in foundation information; however, there are no decreases that are large enough to warrant significant additional attention for the purposes of this report.
October 30, 2018

The Honorable Ralph S. Northam
Governor of Virginia

The Honorable Thomas K. Norment, Jr.
Chairman, Joint Legislative Audit
And Review Commission

Please find enclosed a comparative financial report for Virginia’s four-year public institutions of higher education. This report primarily uses ratio analysis as a means to analyze financial activity at each institution and shows changes in financial performance over time. We have compiled this report by analyzing financial statements audited by our office at each institution for the fiscal years ended June 30, 2015, through June 30, 2017. Should you have any questions, please contact Eric Sandridge, Higher Education Programs Audit Director, or me.

Sincerely,

Martha S. Mavredes
Auditor of Public Accounts
BIBLIOGRAPHY

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**APPENDIX: INSTITUTION BACKGROUND INFORMATION**

**Highest Research Activity Category**

**George Mason University**

George Mason University (GMU) began holding its first classes in 1949. Originally known as the Northern Virginia University Center, the intention for this institution was to provide two-year degrees and transfer students to four-year institutions, upon completion. In the 1950’s, GMU became a branch of the University of Virginia through an act of the Virginia General Assembly. Named after founding father, George Mason, who authored the Virginia Declaration of Rights, GMU began offering four-year degrees in 1966 and became an independent institution in 1972. GMU experienced rapid growth and, throughout the latter 20th century, was known as the most rapidly expanding state institution in Virginia. GMU is the largest public research institution in the Commonwealth based on unduplicated headcount.8

**The University of Virginia**

Thomas Jefferson founded The University of Virginia (UVA) in 1817 before the first Board of Visitors officially chartered the institution in 1819. Today, UVA has three major divisions, including the Academic Division, the Medical Center, and the College at Wise. There are 11 UVA colleges in the Charlottesville area including public policy, arts and sciences, education, business, commerce, architecture, continuing and professional studies, engineering and applied science, law, medicine, and nursing. UVA considers its College at Wise a liberal arts institution, offering 30 different majors. The UVA Medical Center is part of the UVA Health System and is a functioning hospital, which provides medical care to patients.9

**Virginia Commonwealth University**

What is known today as the Virginia Commonwealth University (VCU) Health System was founded in 1838 in Richmond, Virginia as the medical department of Hampden-Sydney College. This medical institution received its independent charter from the Virginia General Assembly in 1854 and officially became the Medical College of Virginia (MCV). In 1925, MCV established its institution of social work and public health as the Richmond Division of the College of William and Mary. This became Richmond Professional Institute (RPI) in 1939 and after adding several liberal arts, business, and other non-medical degrees; RPI dropped its affiliation with the College of William and Mary and combined with MCV to become VCU in 1968. The VCU Health System is a functioning hospital, providing health care to patients and medical education to students. VCU’s mission is to advance knowledge and student success through its commitments to an engaged, learner-centered environment; research; interdisciplinary collaborations; health care; diversity; and sustainable, university-community partnerships.10
**Virginia Polytechnic Institute and State University**

Virginia Polytechnic Institute and State University (VT) originally began in 1872 as a land-grant institution called Virginia Agricultural and Mechanical College. A land grant is a gift of federal land to an institution or organization, usually given to an institution so that they can focus on the teaching of practical agriculture, and other types of subjects outside the realm of liberal arts. After a couple of name changes, in 1970, the state legislature sanctioned university status for VT and gave it the legal name of Virginia Polytechnic Institute and State University, which it still holds today. VT is a science, technology, and engineering institution, with some degrees offered in the liberal arts and other fields of study. VT’s mission states that they are a “public land-grant university serving the Commonwealth of Virginia, the nation, and the world community. The discovery and dissemination of new knowledge are central to its mission. Through its focus on teaching and learning, research and discovery, and outreach and engagement, the university creates, conveys, and applies knowledge to expand personal growth and opportunity, advance social and community development, foster economic competitiveness, and improve the quality of life.”

**Higher Research Activity Category**

**The College of William and Mary**

Chartered in 1693, The College of William and Mary (CWM) is the oldest higher education institution in the Commonwealth of Virginia and is the second oldest functioning college in the nation. In the 17th century, King William III and Queen Mary II of England signed the charter for a "perpetual College of Divinity, Philosophy, Languages, and other good Arts and Sciences" to be founded in the Virginia Colony. CWM was also the first co-ed state college in the Commonwealth. CWM has had affiliations with and helped start Virginia Commonwealth University, Christopher Newport University, Old Dominion University, and today has affiliations with junior college, Richard Bland College and the Virginia Institute of Marine Science, which focuses on marine biology. CWM’s mission is a detailed approach to achieving their vision of “building on more than 300 years of innovation and excellence, breaking the boundaries between research and teaching, student and teacher, living and learning.”

**James Madison University**

Established in 1908, James Madison University (JMU) began as the State Normal and Industrial University for Women. The institution officially changed its name to Madison College in 1938 in honor of President James Madison and went onto become James Madison University in 1977. It was not until 1966 that the institution became a co-ed institution by an action of the Virginia General Assembly. Today, JMU offers more than 120 degree programs, predominately in the area of the liberal arts. JMU’s mission states that the University is “a community committed to preparing students to be educated and enlightened citizens who lead productive and meaningful lives.”
Old Dominion University

Old Dominion University (ODU) was originally founded in 1930 as the Norfolk Division of the College of William and Mary. It became an independent institution in 1962 and was granted university status in 1969. ODU’s focuses on science, engineering, and technology, as these fields are important to the Hampton Roads region. The Institution’s mission states “ODU, located in the City of Norfolk in the metropolitan Hampton Roads region of coastal Virginia, is a dynamic public research institution that serves its students and enriches the Commonwealth of Virginia, the nation, and the world through rigorous academic programs, strategic partnerships, and active civic engagement.”13

Master’s and Baccalaureate Category

Christopher Newport University

Christopher Newport University (CNU) started in 1960 as a full-time extension of the College of William and Mary. CNU was named after Captain Christopher Newport, who was an English sailor who brought settlers to Jamestown and the Virginia Colony and helped found Britain’s first permanent settlement in Bermuda. Christopher Newport College became independent in 1977, offering liberal arts degrees with the intention of becoming a university, which it did in 1992. CNU is the youngest comprehensive institution in the Commonwealth. The institution offers a range of different degrees, but is generally considered a liberal arts institution. CNU’s mission is to “provide educational and cultural opportunities that benefit CNU students, the residents of the Commonwealth of Virginia, and the nation.”15

Longwood University

Originally called the Farmville Female Seminary Association, Longwood University (LU) was founded in 1839 with the intention of providing seminary education to women. It became Longwood College in 1949 and achieved university status in 2002. It became a co-ed institution in 1976. Today, LU is a liberal arts institution, offering over 100 different majors and minors. Longwood’s mission states that the institution is “dedicated to the development of citizen leaders who are prepared to make positive contributions to the common good of society. Building upon its strong foundation in the liberal arts and sciences, the University provides an environment in which exceptional teaching fosters student learning, scholarship, and achievement. As the only four-year public institution in south central Virginia, Longwood University serves as a catalyst for regional prosperity and advancement.”16

Norfolk State University

Norfolk State University (NSU) was founded in 1935 with the intention of helping students become successful through higher education in the midst of the great depression. The Norfolk Unit of Virginia Union University, as it was known at its founding, went on to become the independent Norfolk Polytechnic College in 1942. Through an act of the General Assembly, NSU then became a public institution as a part of Virginia State College (now Virginia State University). NSU began offering its first baccalaureate degree in 1956 and separated from Virginia State, becoming fully independent in 1969.
NSU achieved university status in 1979 and then began granting graduate degrees. NSU’s mission states it “is committed to transforming students’ lives through exemplary teaching, research and service. Offering a supportive academic and culturally diverse environment for all, the University empowers its students to turn their aspirations into reality and achieve their full potential as well rounded resourceful citizens and leaders for the 21st century.”

Radford University

The Commonwealth of Virginia established the State Normal and Industrial University for Women in 1910. The intent of this institution was to prepare female teachers for Virginia’s expanding public university system. In an effort to provide students with a broad professional and technical education, State Teachers College, as Radford was then known, merged with Virginia Polytechnic Institute in 1943. The institution was then the Women’s Division of VPI (now Virginia Tech). In 1964, Radford College split with Virginia Tech and, in 1972, Radford began admitting men into its undergraduate programs. In 1979, Radford College achieved university status and became Radford University, as it is known today.

University of Mary Washington

In 1908, the Commonwealth established the State Normal and Industrial School for Women to focus on providing women with preparatory training to become teachers. The institution was renamed Mary Washington College in 1938 after Mary Ball Washington, George Washington’s mother. In 1944, the Commonwealth affiliated the institution with the University of Virginia and operated as the women’s college for UVA. After becoming co-ed in 1970, Mary Washington College went on to become its own separate entity in 1972. Mary Washington College became the University of Mary Washington after achieving university status in 2004. UMW’s mission states that it is “one of Virginia's outstanding public liberal arts universities, providing a superior education that inspires and enables our students to make positive changes in the world.”

Virginia Military Institute

In the early 19th century, the town of Lexington, Virginia was partially occupied by one of three arsenals in the Commonwealth. An arsenal guard of about 20 soldiers protected this facility. In 1834, the town of Lexington, Virginia proposed to transform this arsenal into a military college for the arsenal guard cadets, which led to the establishment of the Virginia Military Institute (VMI) in 1839. VMI ceased classes for the better part of the civil war. They were able to rebuild and re-open at the conclusion of the war in 1865. Today, VMI is the oldest state-supported military college in the United States. VMI became a co-educational institution in 1997. VMI continues to incorporate military-style training into its mission of providing of higher education. Students live in barracks, sleep on cots, give up television and other amenities, as well as undergo extensive military-style exercises and drills. VMI offers baccalaureate degrees in both engineering, liberal arts, and other fields. It is the mission of VMI “to produce educated, honorable men and women, prepared for the varied work of civil life, imbued with love of learning, confident in the functions and attitudes of leadership, possessing a high sense of public service, advocates of the American democracy and free enterprise system, and ready as citizen-soldiers to defend their country in time of national peril.”
Virginia State University

The Virginia Normal and Collegiate Institute, now known as Virginia State University (VSU), was established by an act of the General Assembly in 1882. The institution became known as Virginia State College in 1946 and split from Norfolk State College in 1969. After achieving university status, the institution was renamed Virginia State University in 1979. VSU offers several different degrees, focusing more on agricultural and natural sciences, as well as engineering and technology. VSU’s mission states that it is a public comprehensive 1890 land grant institution and historically black college/institution and “is committed to the preparation of a diverse population of men and women through the advancement of academic programs and services that integrate instruction, research, extension, and outreach. The University endeavors to meet the educational needs of students, graduating lifelong learners who are well equipped to serve their communities as informed citizens, globally competitive leaders, and highly effective, ethical professionals.”²¹
### CONDENSED STATEMENT OF NET POSITION

**Comparative Report as of Fiscal Year 2017**

#### (in thousands)

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<thead>
<tr>
<th></th>
<th>HIGHEST RESEARCH</th>
<th>HIGHER RESEARCH</th>
<th>MASTER'S AND BACCALAUREATE</th>
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<tr>
<td></td>
<td>UVA</td>
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<td>VT</td>
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<td><strong>ASSETS</strong></td>
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<td>Current Liabilities:</td>
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<td><strong>NET POSITION</strong></td>
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**CONDENSED STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION**

*(in thousands)*

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<thead>
<tr>
<th>UVA</th>
<th>VCU</th>
<th>VT</th>
<th>GMU</th>
<th>CWM</th>
<th>ODU</th>
<th>JMU</th>
<th>CNU</th>
<th>NSU</th>
<th>LU</th>
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<td>$ 461,750</td>
<td>$ 341,059</td>
<td>$ 183,723</td>
<td>$ 144,278</td>
<td>$ 207,014</td>
<td>$ 38,512</td>
<td>$ 26,088</td>
<td>$ 30,992</td>
<td>$ 24,629</td>
<td>$ 61,205</td>
<td>$ 29,116</td>
</tr>
<tr>
<td>Hospital and Patient services, net of charity care</td>
<td>1,545,504</td>
<td>24,841</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Federal grants, contracts, and appropriations</td>
<td>256,145</td>
<td>162,313</td>
<td>213,294</td>
<td>77,543</td>
<td>35,883</td>
<td>7,444</td>
<td>12,819</td>
<td>1,412</td>
<td>17,994</td>
<td>1,766</td>
<td>91</td>
<td>4,039</td>
<td>863</td>
</tr>
<tr>
<td>State and local grants and contracts</td>
<td>7,012</td>
<td>6,264</td>
<td>26,241</td>
<td>30,941</td>
<td>3,811</td>
<td>975</td>
<td>8,515</td>
<td>235</td>
<td>357</td>
<td>1,342</td>
<td>1</td>
<td>1,225</td>
<td>34</td>
</tr>
<tr>
<td>Nongovernmental grants and contracts</td>
<td>58,689</td>
<td>26,512</td>
<td>51,238</td>
<td>-</td>
<td>6,541</td>
<td>2,410</td>
<td>4,099</td>
<td>78</td>
<td>1,050</td>
<td>3,655</td>
<td>-</td>
<td>262</td>
<td>863</td>
</tr>
<tr>
<td>Sales and services of educational departments</td>
<td>43,134</td>
<td>54,182</td>
<td>17,979</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2,052</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>346</td>
</tr>
<tr>
<td>Auxiliary enterprises, net of scholarship allowances</td>
<td>137,057</td>
<td>131,685</td>
<td>251,854</td>
<td>194,634</td>
<td>93,752</td>
<td>122,356</td>
<td>182,512</td>
<td>70,253</td>
<td>23,473</td>
<td>45,519</td>
<td>23,095</td>
<td>54,977</td>
<td>39,667</td>
</tr>
<tr>
<td>Unique military activities, net of scholarships allowances</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other (23,968)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>OPERATING EXPENSES:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instruction</td>
<td>431,214</td>
<td>360,175</td>
<td>357,871</td>
<td>284,234</td>
<td>125,405</td>
<td>166,846</td>
<td>162,056</td>
<td>35,500</td>
<td>37,509</td>
<td>34,763</td>
<td>22,780</td>
<td>70,208</td>
<td>29,404</td>
</tr>
<tr>
<td>Research</td>
<td>331,068</td>
<td>186,645</td>
<td>311,297</td>
<td>67,713</td>
<td>54,704</td>
<td>12,286</td>
<td>3,624</td>
<td>1,728</td>
<td>8,592</td>
<td>62</td>
<td>188</td>
<td>491</td>
<td>301</td>
</tr>
<tr>
<td>Public service</td>
<td>57,332</td>
<td>8,575</td>
<td>97,761</td>
<td>19,292</td>
<td>32</td>
<td>566</td>
<td>15,633</td>
<td>-</td>
<td>-</td>
<td>3,841</td>
<td>1,416</td>
<td>3,322</td>
<td>586</td>
</tr>
<tr>
<td>Academic support</td>
<td>171,604</td>
<td>99,490</td>
<td>87,416</td>
<td>62,582</td>
<td>35,845</td>
<td>42,407</td>
<td>46,945</td>
<td>9,133</td>
<td>12,712</td>
<td>6,957</td>
<td>7,854</td>
<td>10,904</td>
<td>9,030</td>
</tr>
<tr>
<td>Student services</td>
<td>49,515</td>
<td>16,334</td>
<td>18,627</td>
<td>29,392</td>
<td>17,976</td>
<td>18,309</td>
<td>18,609</td>
<td>7,334</td>
<td>5,255</td>
<td>4,437</td>
<td>4,114</td>
<td>6,678</td>
<td>8,069</td>
</tr>
<tr>
<td>Institutional support</td>
<td>144,948</td>
<td>81,918</td>
<td>70,276</td>
<td>47,809</td>
<td>47,133</td>
<td>33,495</td>
<td>34,010</td>
<td>9,870</td>
<td>14,029</td>
<td>11,237</td>
<td>6,454</td>
<td>22,429</td>
<td>9,861</td>
</tr>
<tr>
<td>Operation and maintenance of plant</td>
<td>126,559</td>
<td>81,816</td>
<td>84,917</td>
<td>43,495</td>
<td>26,411</td>
<td>32,739</td>
<td>44,345</td>
<td>9,103</td>
<td>10,376</td>
<td>9,077</td>
<td>8,443</td>
<td>12,828</td>
<td>7,609</td>
</tr>
<tr>
<td>Student aid</td>
<td>74,450</td>
<td>35,294</td>
<td>16,488</td>
<td>27,814</td>
<td>16,498</td>
<td>3,314</td>
<td>10,589</td>
<td>3,415</td>
<td>930</td>
<td>619</td>
<td>1,277</td>
<td>1,058</td>
<td>1,277</td>
</tr>
<tr>
<td>Operation and maintenance of plant, net of scholarships allowances</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>NON-OPERATING REVENUES/(EXPENSES):</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pell grant revenue</td>
<td>12,485</td>
<td>35,294</td>
<td>16,488</td>
<td>27,814</td>
<td>16,498</td>
<td>3,314</td>
<td>10,589</td>
<td>3,415</td>
<td>930</td>
<td>619</td>
<td>1,277</td>
<td>1,058</td>
<td>1,277</td>
</tr>
<tr>
<td>Public service</td>
<td>57,332</td>
<td>8,575</td>
<td>97,761</td>
<td>19,292</td>
<td>32</td>
<td>566</td>
<td>15,633</td>
<td>-</td>
<td>-</td>
<td>3,841</td>
<td>1,416</td>
<td>3,322</td>
<td>586</td>
</tr>
<tr>
<td>Investment income, net</td>
<td>728,658</td>
<td>20,824</td>
<td>18,491</td>
<td>2,362</td>
<td>10,030</td>
<td>1,959</td>
<td>1,777</td>
<td>291</td>
<td>72</td>
<td>384</td>
<td>177</td>
<td>856</td>
<td>105</td>
</tr>
<tr>
<td>Pell grant revenue</td>
<td>12,485</td>
<td>35,294</td>
<td>16,488</td>
<td>27,814</td>
<td>16,498</td>
<td>3,314</td>
<td>10,589</td>
<td>3,415</td>
<td>930</td>
<td>619</td>
<td>1,277</td>
<td>1,058</td>
<td>1,277</td>
</tr>
<tr>
<td>Interest on capital asset related debt</td>
<td>12,485</td>
<td>35,294</td>
<td>16,488</td>
<td>27,814</td>
<td>16,498</td>
<td>3,314</td>
<td>10,589</td>
<td>3,415</td>
<td>930</td>
<td>619</td>
<td>1,277</td>
<td>1,058</td>
<td>1,277</td>
</tr>
<tr>
<td>Other non-operating revenues/(expenses)</td>
<td>(24,374)</td>
<td>4,563</td>
<td>8,108</td>
<td>1,032</td>
<td>(2,529)</td>
<td>244</td>
<td>(1,520)</td>
<td>1,777</td>
<td>(847)</td>
<td>256</td>
<td>(420)</td>
<td>950</td>
<td>980</td>
</tr>
<tr>
<td>Total nonoperating revenue (expenses)</td>
<td>979,727</td>
<td>311,831</td>
<td>352,725</td>
<td>175,247</td>
<td>123,058</td>
<td>190,114</td>
<td>96,289</td>
<td>35,258</td>
<td>70,054</td>
<td>35,785</td>
<td>31,654</td>
<td>73,710</td>
<td>30,789</td>
</tr>
<tr>
<td><strong>Total net position - ending</strong></td>
<td>$ 8,205,417</td>
<td>$ 885,046</td>
<td>$ 1,402,332</td>
<td>$ 712,394</td>
<td>$ 650,273</td>
<td>$ 420,363</td>
<td>$ 770,338</td>
<td>$ 332,874</td>
<td>$ 189,219</td>
<td>$ 179,268</td>
<td>$ 330,176</td>
<td>$ 329,375</td>
<td>$ 156,698</td>
</tr>
</tbody>
</table>

**APPENDIX: CONDENSED FINANCIAL INFORMATION**

Attachment C

Comparative Report as of Fiscal Year 2017
Approval of Financial Plan to Close the Budget Gap Caused by the COVID-19 Pandemic

KEN MILLER, VICE PRESIDENT FOR FINANCE

MARCH 21, 2021
Financial Impact of COVID-19 on 2020-21

• In November 2020, the university provided the Board of Visitors (BOV) with an update on impact of the COVID-19 pandemic on campus finances as determined during the Fall semester and as projected for the 2020-21 fiscal year

• The impact was uneven across campus and primarily effected self-generated revenue activities in Auxiliary Enterprises due to the university’s response to ensure the safety and well-being of the campus community

• University efforts to minimize impact spanned cost control efforts to philanthropy (Athletics)

• This identified a ($63.2) million net budget shortfall as of December 31, 2020 in the Auxiliary Enterprises
Temporary Authority provided by the 2020 Virginia General Assembly in § 3-4.01

For 2020-22 biennium impacts caused by COVID-19 pandemic:

- Ability to reduce the recovery of the institutional indirect cost assessed to Auxiliary Enterprise programs
- Ability to use other fund sources subject to the requirements below:
  - Requires BOV approval and the Board must review the measures of financial status included in the most recent Auditor of Public Accounts Higher Education Comparative Report
  - The resolution is to be shared with the Chairs of the House Appropriations and Senate Finance and Appropriations Committees
  - The use of other fund sources for Intercollegiate Athletics is limited to scholarship support
### Auxiliary Enterprise COVID-19 Impact

*as of December 31, 2020 (dollars in millions)*

<table>
<thead>
<tr>
<th>Auxiliary Enterprise</th>
<th>Revenue</th>
<th>Expense/Cost Savings</th>
<th>Net</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dining</td>
<td>-$36.7</td>
<td>-$13.5</td>
<td>-$23.2</td>
</tr>
<tr>
<td>Athletics</td>
<td>-25.0</td>
<td>-5.9</td>
<td>-19.1</td>
</tr>
<tr>
<td>Residential</td>
<td>-9.9</td>
<td>-1.0</td>
<td>-8.9</td>
</tr>
<tr>
<td>Inn at VT: Hotel &amp; Conference Center</td>
<td>-8.6</td>
<td>-4.0</td>
<td>-4.6</td>
</tr>
<tr>
<td>Electric Service</td>
<td>-3.4</td>
<td>-1.8</td>
<td>-1.6</td>
</tr>
<tr>
<td>Parking &amp; Fleet Services</td>
<td>-3.3</td>
<td>-1.5</td>
<td>-1.8</td>
</tr>
<tr>
<td>Health Services</td>
<td>-0.6</td>
<td>0.7</td>
<td>-1.3</td>
</tr>
<tr>
<td>Other Units (Steger Center, Printing, Center for Arts, Library Photocopy, Licensing/Trademark)</td>
<td>-3.9</td>
<td>-1.2</td>
<td>-2.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>-$91.4</td>
<td>-$28.2</td>
<td>-$63.2</td>
</tr>
</tbody>
</table>
## Auxiliary Financial Plan to Close the Budget Gap Due to COVID-19

as of December 31, 2020 (dollars in millions)

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Support</td>
<td></td>
</tr>
<tr>
<td>CARES Act (via Commonwealth of Virginia)</td>
<td>$10.7</td>
</tr>
<tr>
<td>2nd Stimulus (Consolidated Appropriation Act)</td>
<td>18.1</td>
</tr>
<tr>
<td>State Support</td>
<td>4.0</td>
</tr>
<tr>
<td>Restructuring of Existing Debt (FY21)</td>
<td>10.8</td>
</tr>
<tr>
<td>One-time Savings (health insurance holiday)</td>
<td>4.8</td>
</tr>
<tr>
<td>Relief from Indirect Cost Assessments</td>
<td>13.9</td>
</tr>
<tr>
<td>Expenditure Savings/Cost Control</td>
<td>0.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$63.2</strong></td>
</tr>
</tbody>
</table>
APA Comparative Report

• Original goal was to compare the financial health of all public colleges and universities for fiscal years 2015 through 2017*

• Goal of the required BOV review is to assess the financial health of the university and the potential impact of the funding plan to address COVID-19 related deficits in Auxiliary Enterprises

• The university has used the APA methodology to create the key financial ratios and the Composite Financial Index for the six year period for fiscal years 2015 through 2020

• The university exceeds the applicable benchmarks for these key financial ratios

* a similar report for more recent years is in progress but not yet available
## Key Financial Ratios of Financial Health Cited in APA Comparative Report

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Definition</th>
</tr>
</thead>
</table>
| Primary Reserve           | Snapshot of the financial strength and flexibility of an institution calculated by dividing expendable net assets by total expenses.  
**The accepted benchmark for this ratio is 0.4.** |
| Viability                 | Availability of expendable net position to cover long-term debt and indicates whether an institution can assume new debt calculated by dividing expendable net assets by long-term debt.  
**The accepted benchmark for this ratio is 1.0 or greater.** |
| Net Operating Revenue     | Indicates whether an organization is living within its available resources calculated by dividing net income less capital revenues by noncapital revenues. |
| Return on Net Position    | Answers whether the university is achieving a positive economic return on its investment of resources calculated by dividing change in net assets by total net assets. |

Consistent with the Auditor of Public Accounts report, the impacts of Pension and Other Post Employment Benefits have been excluded.

Measuring the Overall Level of Financial Health

**Primary Reserve Ratio Without Pension & OPEB**

<table>
<thead>
<tr>
<th>Year</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>0.38</td>
</tr>
<tr>
<td>2016</td>
<td>0.42</td>
</tr>
<tr>
<td>2017</td>
<td>0.42</td>
</tr>
<tr>
<td>2018</td>
<td>0.41</td>
</tr>
<tr>
<td>2019</td>
<td>0.43</td>
</tr>
<tr>
<td>2020</td>
<td>0.41</td>
</tr>
</tbody>
</table>

**Viability Ratio Without Pension & OPEB**

<table>
<thead>
<tr>
<th>Year</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>0.93</td>
</tr>
<tr>
<td>2016</td>
<td>1.06</td>
</tr>
<tr>
<td>2017</td>
<td>1.17</td>
</tr>
<tr>
<td>2018</td>
<td>1.21</td>
</tr>
<tr>
<td>2019</td>
<td>1.34</td>
</tr>
<tr>
<td>2020</td>
<td>1.44</td>
</tr>
</tbody>
</table>

**Net Operating Revenue Ratio**

<table>
<thead>
<tr>
<th>Year</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>0.02</td>
</tr>
<tr>
<td>2016</td>
<td>0.01</td>
</tr>
<tr>
<td>2017</td>
<td>0.01</td>
</tr>
<tr>
<td>2018</td>
<td>0.03</td>
</tr>
<tr>
<td>2019</td>
<td>0.03</td>
</tr>
<tr>
<td>2020</td>
<td>0.01</td>
</tr>
</tbody>
</table>

**Return on Net Position Ratio**

<table>
<thead>
<tr>
<th>Year</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>0.04</td>
</tr>
<tr>
<td>2016</td>
<td>0.07</td>
</tr>
<tr>
<td>2017</td>
<td>0.04</td>
</tr>
<tr>
<td>2018</td>
<td>0.05</td>
</tr>
<tr>
<td>2019</td>
<td>0.06</td>
</tr>
<tr>
<td>2020</td>
<td>0.06</td>
</tr>
</tbody>
</table>

---

Measuring the Overall Level of Financial Health

The CFI is a weighted average of the four previous financial ratios. The accepted benchmark is 3.0 or greater. The above statistics include the Virginia Tech Foundation.

Other Actions

- This plan provides proposed solutions to the known or projected financial impacts of COVID-19 through December 31, 2020 and therefore additional actions may be needed.
  - COVID-19 will continue to have local, national, and global impacts into the future & the university will continue to monitor the financial impacts on Spring and Summer semesters and the next fiscal year.
  - The university will continue to monitor for additional governmental support.
  - Any additional information will be shared with the BOV as it becomes known.
- Since this proposed plan is funded primarily with new one-time sources of funds, it is anticipated to have minimal impacts on the financial health of the university.
Approval of Financial Plan to Close the Budget Gap Caused by the COVID-19 Pandemic

RECOMMENDATION:

That the resolution approving Virginia Tech’s financial plan to close the budget gap created by the COVID-19 pandemic be approved.

March 22, 2021
RESOLUTION FOR APPROVAL OF TRANSPORTATION SERVICES FEE REFUND FOR SPRING 2021

FINANCE AND RESOURCE MANAGEMENT COMMITTEE

January 31, 2021

The Town of Blacksburg received federal support through the Coronavirus Aid, Relief, and Economic Security (CARES) Act to support the cost of mass transit during the COVID-19 pandemic. This support provides relief to the Town of Blacksburg’s Blacksburg Transit system, which Virginia Tech students, staff, and faculty rely on. As a result of this support, the Town of Blacksburg has lowered the university’s contractual contribution for the 2020-21 fiscal year. This support will allow the university to reduce the Transportation Services Fee paid by students on the Blacksburg campus. The approved Transportation Services fee for Spring 2021 for regular full-time students on the Blacksburg campus is $96, while part-time students and students in different statuses pay a reduced amount. Given that the 2020-21 Transportation Services fee was approved by the Board of Visitors in June 2020 and has been assessed for the spring semester, the university, with concurrence from the Town of Blacksburg, recommends refunding the main campus Transportation Services Fee for Spring semester 2021.

RECOMMENDATION:

That the university refund the 2021 spring semester Transportation Services Fee to reflect the cost reduction from the Town of Blacksburg transit contract made possible by federal CARES Act support for transit service received by the town.

March 22, 2021
Resolution for Approval of Transportation Services Fee Refund for Spring 2021

KEN MILLER, VICE PRESIDENT FOR FINANCE
MARCH 21, 2021
Transit Services Fee Refund

- The Town of Blacksburg received federal support through the Coronavirus Aid, Relief, and Economic Security (CARES) Act to support the cost of mass transit during the COVID-19 pandemic.
- This support provides relief to the Blacksburg Transit system, which Virginia Tech students, staff, and faculty rely on.
- The Town of Blacksburg lowered Virginia Tech’s contractual contribution for the 2020-21 fiscal year.
- This allows the university to reduce the Transportation Services fee paid by students in the form of a refund in Spring 2021:
  - $96 refund to regular, full-time students on the Blacksburg campus
  - Part-time students or students of different statuses refunded a reduced amount based on the amount assessed.

RECOMMENDATION:

That the university refund the 2021 spring semester Transportation Services Fee to reflect the cost reduction from the Town of Blacksburg transit contract made possible by federal CARES Act support for transit service received by the town.

March 22, 2021
Budget Background

- The budget is a quantification of the university's strategic plan.
- Multi-year planning to achieve institution’s strategic goals.
- Impacted by cost drivers.
- Continuous review of operations and opportunity for efficiency enhancements to ensure maximization of existing resources.
- Focus on student access and affordability.
University Division Educational & General Program 2020-21 Revenue Sources

- Out-of-state Tuition & Fees: $317.3 million (37.5%)
- In-state Tuition & Fees: $283.0 million (33.5%)
- State General Fund: $199.0 million (23.5%)
- All Other Income: $32.9 million (3.9%)
- Continuing Education: $13.5 million (1.6%)

Total 208 E&G Revenue: $845.7 million (100%)

(Source: FY 2020-21 - December 3rd, 2020 Adjusted Budget, excluding CARES)
Budget Management Strategies

• In parallel to understanding cost drivers, university develops resource plan.
  • How can existing resources be maximized?
    • Reallocations/Reductions
  • Seek new General Fund support from State
    • Ensure state share of mandated costs
    • Advocate for investment
  • Strategic enrollment management
    • In and outside of Blacksburg
    • Graduate Professional programs
• Last resort: Tuition and Fee increase
2021-22 Major Cost Drivers

• State Faculty & Staff Compensation
• State mandated healthcare rate increases
• Fixed cost increases and Operation and Maintenance of Facilities
• Student Financial Aid
  • Support achievement of enrollment goals including strategic populations
  • Enhancements for the reduction of unmet need
• Enrollment Growth Support
  • Faculty, college needs
## 2021-22 E&G Cost Drivers

### State Cost Drivers

<table>
<thead>
<tr>
<th>Cost</th>
<th>Amount ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Health Insurance Increase</td>
<td>2.6</td>
</tr>
<tr>
<td>Faculty/Staff/Graduate Assistant Raise</td>
<td>27.6</td>
</tr>
<tr>
<td>Virginia Military Dependent &amp; Survivor Benefits</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Subtotal State Mandated Costs</strong></td>
<td><strong>31.6</strong></td>
</tr>
</tbody>
</table>

### Unavoidable Costs

<table>
<thead>
<tr>
<th>Cost</th>
<th>Amount ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Costs [Utilities, Insurance, Workers Comp, Leases]</td>
<td>2.2</td>
</tr>
<tr>
<td>Operation &amp; Maintenance of New Facilities</td>
<td>2.1</td>
</tr>
<tr>
<td><strong>Subtotal Unavoidable Costs</strong></td>
<td><strong>4.3</strong></td>
</tr>
</tbody>
</table>

**Subtotal State Mandated and Unavoidable Costs** 35.9
### 2021-22 E&G Cost Drivers

<table>
<thead>
<tr>
<th>Strategic Initiatives</th>
<th>$s in Millions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advance Regional, National, and Global Impact</strong></td>
<td></td>
</tr>
<tr>
<td>Destination Area Faculty</td>
<td>1.1</td>
</tr>
<tr>
<td>Enrollment Growth Support (PIBB)</td>
<td>1.3</td>
</tr>
<tr>
<td>Self-Generated College Support</td>
<td>3.3</td>
</tr>
<tr>
<td>Prior Academic Commitments</td>
<td>2.7</td>
</tr>
<tr>
<td><strong>Elevate the Ut Prosim Difference</strong></td>
<td></td>
</tr>
<tr>
<td>Accessibility, Title IX, Captioning</td>
<td>0.7</td>
</tr>
<tr>
<td>Support for Strategic Recruitments</td>
<td>0.3</td>
</tr>
<tr>
<td>Provost Excellence Scholarship</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Be a Destination For Talent</strong></td>
<td></td>
</tr>
<tr>
<td>Student Financial Aid</td>
<td>2.1</td>
</tr>
<tr>
<td>Promotion and Tenure</td>
<td>0.8</td>
</tr>
<tr>
<td><strong>Ensure Institutional Excellence</strong></td>
<td></td>
</tr>
<tr>
<td>Other Commitments</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Capacity for Critical Needs</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.4</td>
</tr>
<tr>
<td><strong>Subtotal - Strategic Investments</strong></td>
<td>18.2</td>
</tr>
</tbody>
</table>
## 2021-22 E&G Budget Development Summary

### Cost Drivers

<table>
<thead>
<tr>
<th>Description</th>
<th>2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Cost Drivers</td>
<td>(31.6)</td>
</tr>
<tr>
<td>Unavoidable Cost Increases</td>
<td>(4.3)</td>
</tr>
<tr>
<td>Strategic Investments</td>
<td>(18.2)</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td><strong>(54.1)</strong></td>
</tr>
</tbody>
</table>

### Resource Plan - Part 1

<table>
<thead>
<tr>
<th>Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>State Share of Mandatory Costs</td>
<td>11.7</td>
</tr>
<tr>
<td>Enrollment</td>
<td>4.5</td>
</tr>
<tr>
<td>Phase-In of Previously Approved Program Fees</td>
<td>7.1</td>
</tr>
<tr>
<td><strong>Subtotal - Current Resources</strong></td>
<td><strong>23.3</strong></td>
</tr>
<tr>
<td><strong>Remaining Resource Gap</strong></td>
<td><strong>(30.8)</strong></td>
</tr>
</tbody>
</table>

*Tuition Increase Needed To Close Gap (if no other actions were taken) 5.9%*
## 2021-22 Tuition Mitigation

### Tuition Increase Needed To Close Gap (if no other actions were taken)

<table>
<thead>
<tr>
<th>$s in Millions</th>
<th>Tuition %</th>
</tr>
</thead>
<tbody>
<tr>
<td>(30.8)</td>
<td>5.9%</td>
</tr>
</tbody>
</table>

### Recommendation to Balance University Division Budget for 2021-22

<table>
<thead>
<tr>
<th>Description</th>
<th>$s in Millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Allocations of Base General Fund</td>
<td>4.0</td>
</tr>
<tr>
<td>University Reallocations (2020-21 Budget Reductions)</td>
<td>10.8</td>
</tr>
<tr>
<td>Tuition and E&amp;G Fees Base Rate Increase</td>
<td>16.0</td>
</tr>
<tr>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>

Total: 0

### One-time Actions for 2021-22

<table>
<thead>
<tr>
<th>Description</th>
<th>$s in Millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Allocation of One-time General Funds</td>
<td>4.9</td>
</tr>
<tr>
<td>One-time Tuition Rate Relief (28.2%)</td>
<td>-4.9</td>
</tr>
<tr>
<td></td>
<td>-0.8%</td>
</tr>
</tbody>
</table>

Effective (Net) Tuition Increase for 2021-22: 0 2.1%
DISCUSSION
Proposed Tuition and Fee Rates for 2021-22

FINANCE AND RESOURCE MANAGEMENT COMMITTEE

March 9, 2021

Development of 2021-22 Tuition and Fee Rates

The university has traditionally developed tuition and fee proposals in February and March of each year, with final rates submitted to the Board of Visitors in late March or April. This process allows the university to incorporate the impact of legislative actions taken during the General Assembly session into the tuition and fee proposals. Finalizing these rates at the Spring Board of Visitors meeting helps students plan for the financial costs of the upcoming academic year and allows the Office of University Scholarships and Financial Aid to deliver timely and effective financial aid award information to current and prospective students.

The 2021 General Assembly session adjourned on March 1st, 2021, passing amendments to the 2020-22 biennial budget for final approval by the Governor. Though the impacts of the COVID-19 pandemic continue to strain the nation, the commonwealth has thus far avoided reducing its support for Virginia Tech and has provided some additional resources to help offset some of the costs borne by the university. The General Assembly also provided a one-time allocation of General Fund support that will allow the university to provide one-time relief equivalent to 28.2% of the previously estimated tuition increases for most student categories for 2021-22. With an understanding of the major revenue and cost changes resulting from the amended state budget, the university recommends the following tuition and fee adjustments to address the university’s estimated 2021-22 resource needs.

Attached Schedules 1–7 provide a summary of all tuition and fee rates proposed for 2021-22, including any increase/decrease from the prior year.

Impact of Student Financial Aid Programs

As reported to the Board in November 2020, the university maintains a robust student financial aid program to ensure access and affordability of the institution’s programs. Consistent with this goal, it is important to remember that the proposed charges represent the gross amount assessed to students and may be offset by one of the university’s various financial assistance programs. This includes the Funds for the Future program, which shelters returning undergraduate students from tuition and fee increases for families with incomes up to $100,000, and new investments that expand the overall student financial aid program. The university continues to make strategic investments into student financial aid programs that support low- to middle-income students and support enrollment management strategies.

Tuition

The defined state process envisions utilizing the Six-Year Financial Plans that are developed in accordance with state guidelines and approved by the Board as the framework for the development of tuition and Educational & General (E&G) fees, given certain assumptions about General Fund support provided by the General Assembly. However, development of tuition and fee recommendations for the coming year must consider the actual level of support proposed by
the commonwealth and nongeneral fund cost assignments when available. The university has worked to balance these criteria in developing the proposed annual base tuition rates, including the state’s allocation of one-time General Fund support that will allow the university to provide rate increase relief to most student categories in 2021-22, as seen in the following tables. The proposed full-time annual 2021-22 rates are shown below. The one-time relief reduces the 2.9% base rate increase to a 2.1% increase. Semester rates equal one-half of annual rates.

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22 Base</th>
<th>Proposed 2021-22 Net of One-time Relief</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Undergraduate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>$11,420</td>
<td>$11,751</td>
<td>$11,658</td>
</tr>
<tr>
<td>Nonresident</td>
<td>29,960</td>
<td>30,829</td>
<td>30,584</td>
</tr>
<tr>
<td><strong>Graduate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-campus Programs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>13,701</td>
<td>14,098</td>
<td>13,986</td>
</tr>
<tr>
<td>Nonresident</td>
<td>27,614</td>
<td>28,415</td>
<td>28,189</td>
</tr>
<tr>
<td>Off-campus Programs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>15,167</td>
<td>15,607</td>
<td>15,483</td>
</tr>
<tr>
<td>Nonresident</td>
<td>29,559</td>
<td>30,416</td>
<td>30,174</td>
</tr>
</tbody>
</table>

**Part-Time Students**

Part-time tuition charges for all student categories are derived from the full-time rate and are directly related to the number of credit hours taken. For tuition calculation purposes, the full-time undergraduate semester rate is divided by twelve credit hours and the full-time graduate student semester rate is divided by nine hours. The proposed per-hour charges for 2021-22 are:

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22 Base</th>
<th>Proposed 2021-22 Net of One-time Relief</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Undergraduate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>$475.75</td>
<td>$489.75</td>
<td>$485.75</td>
</tr>
<tr>
<td>Nonresident</td>
<td>1,248.25</td>
<td>1,284.50</td>
<td>1,274.25</td>
</tr>
<tr>
<td><strong>Graduate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-campus Programs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>761.25</td>
<td>783.25</td>
<td>777.00</td>
</tr>
<tr>
<td>Nonresident</td>
<td>1,534.00</td>
<td>1,578.50</td>
<td>1,566.00</td>
</tr>
<tr>
<td>Off-campus Programs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>842.50</td>
<td>867.00</td>
<td>860.00</td>
</tr>
<tr>
<td>Nonresident</td>
<td>1,642.25</td>
<td>1,689.75</td>
<td>1,676.25</td>
</tr>
</tbody>
</table>
Special Tuition Rates

Summer and Winter Session Rate

The Higher Education Opportunity Act of 2011 outlines several objectives that seek to expand access to and promote degree completion across the commonwealth’s higher education system. During non-traditional academic time periods, increasing year-round utilization of facilities and advancing opportunities for degree completion is an important strategy for supporting these objectives. To position the university for continued innovation in non-traditional session enrollment growth, in 2012-13 the university shifted the assessment of undergraduate tuition to a per-credit hour basis at a ten percent discount of the regular session hourly rates for on-campus students. The university proposes to continue this assessment methodology for the 2021-22 Winter and Summer sessions. This approach provides a financial incentive for students to complete their degree at an accelerated pace and offers improved flexibility for faculty to innovate academic offerings during these non-traditional sessions. The proposed per-hour charges for Winter 2021 and Summer 2022 are:

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Proposed Charge</th>
<th>2021-22 Proposed Base</th>
<th>2021-22 Net of One-time Relief</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-campus Resident</td>
<td>$ 428.25</td>
<td>$ 440.75</td>
<td>$ 437.25</td>
</tr>
<tr>
<td>Nonresident</td>
<td>1,123.00</td>
<td>1,156.00</td>
<td>1,146.75</td>
</tr>
</tbody>
</table>

Veterinary Medicine

When the Virginia-Maryland Regional College of Veterinary Medicine was formed, the two states agreed to provide equal contributions (per Virginia and Maryland student) to the instructional operating budget. It was also agreed that both Virginia and Maryland students would pay the same resident tuition rate. The tuition agreement has been sustained since the first class was admitted.

Until 1996-97 only residents of Virginia and Maryland were admitted for study in the professional veterinary medicine curriculum. In 1996-97, the enrollment policy was modified to admit nonresident students (i.e. non-Virginia and non-Maryland residents). This change did not affect the enrollment totals for Virginia or Maryland. For 2021-22, the enrollment plan envisions 40 nonresident students in the entering cohort.

Each year the tuition proposal is reviewed with the Virginia-Maryland Regional College of Veterinary Medicine Budget and Program Review Board (established to review the college's budget and comprised of representatives from Virginia Tech and the University of Maryland). The university, in conjunction with the Budget and Program Review Board, proposes the following increases of 2.5% and 2.0% in the resident and nonresident tuition rates for veterinary medicine students for 2021-22. The commonwealth’s one-time relief reduces the rate increases to 1.8% and 1.5% respectively. The current and proposed annual tuition rates are displayed below:

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Proposed Charge</th>
<th>2021-22 Proposed Base</th>
<th>2021-22 Net of One-time Relief</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virginia/Maryland Students</td>
<td>$ 21,906</td>
<td>$ 22,462</td>
<td>$ 22,305</td>
</tr>
<tr>
<td>Nonresident Students</td>
<td>50,435</td>
<td>51,459</td>
<td>51,170</td>
</tr>
</tbody>
</table>

Presentation Date: March 21, 2021
Virginia Tech Carilion School of Medicine

Integrated as the ninth college of Virginia Tech on July 1, 2018, the Virginia Tech Carilion School of Medicine is funded through a combination of medical student tuition and partnership support. The one-time relief reduces the 2.9% base rate increase to a 2.1% increase. The current and proposed annual tuition rates are displayed below:

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>Proposed</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Charge</td>
<td>Base</td>
<td>Net of One-time Relief</td>
</tr>
<tr>
<td>Medical Education</td>
<td>$ 53,113</td>
<td>$ 54,653</td>
<td>$ 54,219</td>
</tr>
</tbody>
</table>

Program Specific Online Graduate Tuition Rates

For select online graduate programs with significant demand beyond the commonwealth’s borders and the capacity for growth, the university has developed a tiered set of tuition rates that apply to all students in each program. These rates ensure coverage of the direct and indirect cost of instruction and satisfy state policy requiring that nonresident students be assessed at least the average cost of education. This rate structure is organized into four tiers; market assessment and review of program costs determine each program’s rate tier. Students are also assessed the traditional mandatory E&G fees (Library and Technology). As completely online programs, students are not assessed the Commonwealth Facility and Equipment Fee. As a self-supporting program, the 2021-22 one-time relief program is not applicable.

The proposed per-credit hour tiered tuition rates and the approved programs in each tier are summarized below:

<table>
<thead>
<tr>
<th>Program Specific Online Graduate Tuition</th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 Rate</td>
<td>N/A</td>
<td>$ 1,075.00</td>
</tr>
<tr>
<td>Online Master of Business Administration (OMBA) (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tier 2 Rate</td>
<td>$ 975.00</td>
<td>$ 1,000.00</td>
</tr>
<tr>
<td>Master of Information Technology (MIT)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master of Agricultural &amp; Applied Economics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tier 3 Rate</td>
<td>900.00</td>
<td>925.00</td>
</tr>
<tr>
<td>Master of Natural Resources (MNR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master of Agriculture and Life Sciences (OMALS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tier 4 Rate</td>
<td>825.00</td>
<td>850.00</td>
</tr>
<tr>
<td>Graduate Certificate in Local Government Mgt (LGMC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Certificate in Leadership for an Aging Society (ASCC)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) Rate effective beginning Summer semester 2021.
Professional Masters and Certificate Pricing

To support the strategic goal of increasing the number of students enrolled in professional graduate degree and certificate programs, specifically at sites outside of the Blacksburg campus, the university proposes continuing the development of market-based pricing strategies in select programs. Programs eligible for these pricing strategies will display market demand that extends beyond the commonwealth and generate net revenue above the direct and indirect cost of instruction (therefore, above the average cost of education). In some cases, a program-specific supplemental fee may also be approved.

The specific programs listed below are approved to utilize a market-based residency-neutral tuition rate that achieves the average cost of education and improves the program’s ability to recruit participants from beyond the commonwealth. As a self-supporting program, the 2021-22 one-time relief program is not applicable. For 2021-22, the following rates are proposed to be assessed on a per-credit basis for all enrolled credits:

<table>
<thead>
<tr>
<th>Program</th>
<th>2020-21 Charge</th>
<th>Proposed Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evening MBA (EvMBA)</td>
<td>$1,025.00</td>
<td>$1,050.00</td>
</tr>
<tr>
<td>Data Analysis and Applied Statistics (DAAS)</td>
<td>1,025.00</td>
<td>1,050.00</td>
</tr>
<tr>
<td>M.S. Business Analytics – HTM</td>
<td>N/A</td>
<td>1,050.00</td>
</tr>
<tr>
<td>XMNR (Spring 2022 cohort)</td>
<td>N/A</td>
<td>1,050.00</td>
</tr>
</tbody>
</table>

Special Tuition Rate for Elementary and Secondary School Personnel

The original policy regarding special tuition rates for elementary and secondary school personnel was approved in 1984 and allowed public school teachers to attend graduate classes at Virginia Tech on a reduced tuition schedule for purposes of recertification. Recertification is a statewide requirement that can strengthen the total education system. The original policy underscored the university’s commitment to improving the quality of elementary and secondary education through the continued education of elementary and secondary school teachers.

In January 1989 the Board of Visitors approved a revised policy. Teachers, counselors, administrators, and supervisors employed by elementary and secondary school systems in the Commonwealth of Virginia could enroll in graduate classes, both on-campus and at off-campus locations, and pay approximately 60 percent of the authorized tuition rate. The Board of Visitors also expanded the policy in two ways: First, all elementary and secondary school personnel became eligible for the reduced tuition rate. Second, all graduate hours qualify for the plan, not just recertification hours. Further, elementary and secondary school personnel may enroll in an unlimited number of graduate courses for the purpose of recertification or for an advanced degree.

In February 1999 the Board of Visitors approved an expansion of the special tuition rate to include undergraduate-level courses for vocational teachers who do not have a bachelor’s degree.

In 2015-16, the Board of Visitors established a 25 percent discount, resulting in a special tuition rate for elementary and secondary school personnel of 75 percent of the corresponding campus tuition rates (excludes professional and executive programs). Continuing the 25 percent discount for 2021-22 is recommended.
The following table shows the proposed special rates for Elementary and Secondary School Personnel per-credit hour for 2021-22 Virginia residents:

<table>
<thead>
<tr>
<th></th>
<th>Proposed 2020-21</th>
<th>Proposed 2021-22</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Undergraduate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-campus</td>
<td>$357.00</td>
<td>$367.25</td>
<td>$364.25</td>
</tr>
<tr>
<td><strong>Graduate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-campus</td>
<td>571.00</td>
<td>587.50</td>
<td>582.75</td>
</tr>
<tr>
<td>Extended Campus</td>
<td>632.00</td>
<td>650.25</td>
<td>645.00</td>
</tr>
</tbody>
</table>

**Special Tuition Rate for Study-Abroad Programs**

Providing study-abroad opportunities is an important strategy in strengthening Virginia Tech’s international programs. The Board of Visitors previously approved a special tuition rate for students who participate in the various study-abroad programs operated by the university. The special tuition rate reflects instructional services that all students receive, but excludes the cost of on-campus services.

In 2008-09 the study abroad rate was 80 percent of the on-campus tuition rates. The university proposes to continue the special tuition rate for study-abroad programs. Consistent with prior years, the special tuition rate for study abroad would not apply for students studying at the Steger Center for International Scholarship.

The following table shows the proposed special rates for study-abroad programs per-credit hour for 2021-22:

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Undergraduate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>$381.00</td>
<td>$391.75</td>
<td>$388.75</td>
</tr>
<tr>
<td>Nonresident</td>
<td>999.00</td>
<td>1,027.50</td>
<td>1,019.50</td>
</tr>
<tr>
<td><strong>Graduate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>609.00</td>
<td>626.50</td>
<td>621.50</td>
</tr>
<tr>
<td>Nonresident</td>
<td>1,227.00</td>
<td>1,262.75</td>
<td>1,252.75</td>
</tr>
</tbody>
</table>

**Special Tuition Rate for Graduate Candidacy Status**

To recognize the largely independent nature of doctoral students who have completed two years of course work, passed their preliminary exam, and are engaged in research and dissertation efforts, the university recommends a new lower tuition rate for research and dissertation hours for students in this status. Candidacy Status is conferred upon application to and certification by the Graduate School that a student has completed two years of course work and passed their preliminary exam. A reduced tuition rate for Candidacy Status is intended to incentivize time-to-degree for Ph.D. students, minimize the cost to research programs, and better position the university within the competitive market. As an incentive to graduate, the rate is available for a maximum of two years for full-time students. This rate does not apply to executive graduate.
programs. The tuition rates for research and dissertation hours will be discounted 10 percent. The special tuition rate per credit hour for Candidacy Status is displayed below:

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge</th>
<th>Proposed Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Resident Blacksburg</td>
<td>N/A</td>
<td>$705.00</td>
</tr>
<tr>
<td>Graduate Nonresident Blacksburg</td>
<td>N/A</td>
<td>1,420.75</td>
</tr>
<tr>
<td>Graduate Resident Extended Campus</td>
<td>N/A</td>
<td>780.25</td>
</tr>
<tr>
<td>Graduate Nonresident Extended Campus</td>
<td>N/A</td>
<td>1,520.75</td>
</tr>
</tbody>
</table>

**Educational and General Fees**

**Technology Service Fee**

In accordance with the language in the 1998 Appropriation Act, the university implemented an Educational and General technology service fee effective with the 1998 fall semester for all students. The fee is currently $76 per academic year. Part-time students pay half the full-time rate. A $2 increase to the Technology Services Fee is recommended for 2021-22.

**Library Fee**

Beginning in Fall 2013, the university instituted an annual fee to support a robust scholarly environment to advance academic achievement. The Library Fee supports comprehensive library resources, online access to library resources for enrolled students, and enhancements to student library services. The fee is currently $99 per year. Part-time students pay half of the full-time rate. A $3 increase to the Library fee is recommended for 2021-22.

**Commonwealth Facility and Equipment Fee**

The 2003 General Assembly required the establishment of a capital fee to be assessed to all nonresident students at institutions of higher education for 2003-04 to pay a portion of the debt service on bonds issued under the 21st Century Debt Program issued for construction of new facilities on campus. The 2004 General Assembly increased the nongeneral fund portion of lease payments for the 2004-06 allocation of equipment under the Higher Education Equipment Trust fund and stipulated the source of the nongeneral funds be an increase in fees for nonresident students at public institutions of higher education starting in 2005-06. Part-time students pay half the full-time rate. The Commonwealth Facility and Equipment fee of $604 is assessed to all nonresident students. No change in the Commonwealth Facility and Equipment fee is proposed for 2021-22.

**Immigration Services Fee**

To support the administrative costs and maintain the quality of immigration services provided to degree-seeking undergraduate and graduate international students, the university implemented an Immigration Services Fee beginning with students enrolling in Fall 2018. This fee helps support costs uniquely associated with the administration of international student enrollment such as academic and financial verification, immigration regulation, Student and Exchange Visitor Program System (SEVIS) reporting requirements, financial processing fees, and compliance with United States Government regulations. International students on a domestic campus are
assessed the fee. For international Graduate students on assistantship, the fee is remitted under Section 4-2.01b.6 of the Virginia Appropriation Act in recognition of their service to the University. The Immigration Services fee of $275 per semester is assessed to all degree-seeking students on a Type F or Type J visa. No change in the fee is recommended for 2021-22.

**Average Cost of Education**

The Commonwealth of Virginia has a well-established methodology for computing the per student educational cost for colleges and universities. This process identifies the average educational cost for all undergraduate and graduate students, including part-time and full-time students taking classes at both on-campus and off-campus locations. The Average Cost of Education does not include professional programs such as veterinary medicine.

Until 2004, the Average Cost of Instruction was utilized as the measure of per student instructional cost. The Average Cost of Instruction identified the instructional cost components within the Educational and General appropriation and computed an average instructional cost. In 2004, a new state policy replaced the Average Cost of Instruction with the Average Cost of Education. The Average Cost of Education is the instructional funding need generated by the base budget adequacy model. The Average Cost of Education is not comparable to the Average Cost of Instruction due to the differences in methodology.

The Average Cost of Education now serves as the basis for ensuring that nonresident undergraduate and graduate students cover at least 100 percent of the average cost of their education as the General Assembly instructed colleges and universities in the 1991 legislative session. Nonresident tuition and mandatory E&G fee rates for the upcoming academic year are examined against the Average Cost of Education in the prior year to insure they cover 100 percent of the Average Cost of Education. Commonwealth policy continues to allow the university to recover the full cost from nonresidents as a group.

Because the State Council of Higher Education for Virginia does not compute the Average Cost of Education until July, the following table presents Virginia Tech’s estimate of the Average Cost of Education and coverage percentages by student category for 2020-21. The Average Cost of Education is estimated to be $20,803. The proposed Virginia Tech nonresident tuition and mandatory E&G fees are 145 percent of the Average Cost of Education and are in compliance with state tuition policy. Average percentages of the Cost of Education by individual student category are summarized in the following schedule.

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>2021-22 Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Average Cost of Education</td>
<td>$20,289</td>
<td>$20,803</td>
</tr>
<tr>
<td>Undergraduates*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residents</td>
<td>11,595 57%</td>
<td>11,838 57%</td>
</tr>
<tr>
<td>Nonresidents</td>
<td>30,135 149%</td>
<td>30,764 148%</td>
</tr>
<tr>
<td>Graduates*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residents</td>
<td>13,876 68%</td>
<td>14,166 68%</td>
</tr>
<tr>
<td>Nonresidents</td>
<td>27,789 137%</td>
<td>28,369 136%</td>
</tr>
</tbody>
</table>

*Nonresident tuition and mandatory E&G fees are 145 percent of the Average Cost of Education.
Residency
Residents 58% 58%
Nonresidents 145% 145%

*Amounts include proposed tuition and E&G fees. The nonresident facility and equipment fee is not comparable to the Average Cost of Education.

Excess Credit Hour Surcharge

The 2006 General Assembly (§ 23.1-509 Code of Virginia) required the establishment of a surcharge to be assessed to all resident undergraduate students beginning in the semester after 125 percent of credit hours required for baccalaureate degrees have been completed.

This applies to students entering on or subsequent to August 1, 2006. The surcharge amount is the difference between the Average Cost of Education and the in-state undergraduate tuition and mandatory E&G fees. In effect, the surcharge requires the in-state student to pay the Average Cost of Education once they have exceeded 125 percent of degree requirements.

The following table displays the actual 2020-21 surcharge amount and an estimated surcharge amount for 2021-22 based on Virginia Tech’s estimate of the Average Cost of Education for 2021-22 and the proposed 2021-22 tuition and mandatory E&G fees included in this package.

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge</th>
<th>Estimated 2021-22*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Cost of Education</td>
<td>$20,289</td>
<td>$20,803</td>
</tr>
<tr>
<td>In State Undergraduate Tuition and E&amp;G Fees</td>
<td>11,595</td>
<td>11,838</td>
</tr>
<tr>
<td>Surcharge-Annual</td>
<td>8,694</td>
<td>8,965</td>
</tr>
<tr>
<td>Surcharge Per Credit Hour</td>
<td>$362.25</td>
<td>$373.50</td>
</tr>
</tbody>
</table>

*The Average Cost of Education for 2021-22 is an estimated value pending SCHEV’s computation in July 2021.

Comprehensive Fee

The Student Activity Fee, the Health Service Fee, the Athletic Fee, the Transportation Services Fee, the Recreational Sports Fee, the Student Services Fee, and the Student Cultural Activities Fee are consolidated into one Comprehensive Fee in order to streamline the process for collecting and accounting for these charges. The $2,154 per student fee is the lowest Comprehensive Fee charged by any public four-year institution in Virginia in 2020-21. Comprehensive fees at the other five public doctoral institutions range from $2,451 to $6,058. Individual descriptions and recommended amounts for 2021-22 are below for each component of the Comprehensive Fee. Part-time students pay one-half of each fee.
Student Activity Fee

The Student Activity Fee covers the maintenance and operation of the student centers, student programs, and supports student activities as determined by the Student Budget Board. Cost pressures for 2021-22 include support for planned state compensation programs, adjustments to fringe benefit rates, increased student organization support, increased hourly wage and state salary compensation, utility costs, student affairs support services, Cultural and Community Center staffing and program support, increased student organization staffing and program support, and operating costs. However, after considering all available resources, no change to the current Student Activities fee of $330 per academic year is recommended for 2021-22.

Health Service Fee

The Health Service Fee supports normal medical and nursing attention and counseling services provided by Schiffert Student Health Services, Cook Counseling Center, and Virginia Tech Rescue Squad operations. An increase of $49 in the Health Service Fee is recommended for 2021-22 to cover planned state compensation programs, adjustments to fringe benefit rates, expanded health clinic hours and staffing needs, Cook Counseling Center operating support, increased hourly wage and salary compensation, utility costs, student affairs support services, and operating costs. The total fee is currently $508 per academic year. For 2021-22, an increase of the Health Service Fee to $557 per academic year is recommended.

Athletic Fee

A portion of the university’s athletic program operations is supported by the Athletic Fee. The student fee revenue covers the costs of athletic administration and sponsoring intercollegiate varsity sports that do not generate revenue. This fee entitles students to free admissions into sporting events, while recognizing that student seating is limited thus not guaranteed. An increase of $36 in the Athletics Fee is recommended for 2021-22 to cover facility and maintenance costs and inflationary pressures on non-revenue sports and activities. The current fee is $326 per academic year. For 2021-22, an increase of the Athletic Fee to $362 per academic year is recommended. § 23.1-1309 of the Code of Virginia limits the percentage share and annual growth of the student fee component as a portion of the overall intercollegiate athletics revenue. The 2021 General Assembly approved temporary relief of this provision due to the revenue impacts of COVID-19; therefore, the university remains in compliance with applicable law.

Transportation Services Fee

Students enrolled at Virginia Tech have unlimited access to bus transportation provided by the Blacksburg Transit System through a contract the university negotiates with the Town of Blacksburg each year. In addition to the convenience for students, the bus system and alternative transportation programs save the university considerable resources by lowering requirements for on-campus parking. An increase of $2 in the Transportation Services Fee is recommended for 2021-22 to cover the need for increased service levels in high density areas, enhanced transit service routes, transit contract increases, planned state compensation programs, adjustments to fringe benefit rates, increased hourly wage and salary compensation, and operating costs. The current fee is $192 per academic year. For 2021-22, an increase of the Transportation Services Fee to $194 per academic year is recommended.
Recreational Sports Fee

The Recreational Sports Fee supports debt retirement, maintenance, operations, intramural and extramural sports club programs, and recreational activities. An increase of $8 in the Recreational Sports Fee is recommended for 2021-22 to cover planned state compensation programs, adjustments to fringe benefit rates, increased hourly wage and salary compensation, utility costs, student affairs support services, and operating costs. The current fee is $327 per academic year. For 2021-22, an increase to the Recreational Sports Fee to $335 per academic year is recommended.

Student Services Fee

The Student Services Fee supports Career Services, non-self-supporting student services components of the Hokie Passport Office including the cost of new student IDs, the Division of Student Affairs, and the campus wireless network. An increase of $4 in the Student Services Fee is recommended for 2021-22 to cover network infrastructure renewal and student services staffing needs. The current fee is $298 per academic year. For 2021-22, an increase to the Student Services Fee to $302 per academic year is recommended.

Student Cultural Activities Fee

The Student Cultural Activities Fee supports the presence and practice of the arts across campus for all students, and provides free or greatly reduced admission to enrolled students. Cost pressures for 2021-22 include support for planned state compensation programs, adjustments to fringe benefit rates, utility costs, and operating costs. However, considering all available resources, a decrease of $9 to the current Student Cultural Activities fee is recommended, resulting in a Student Cultural Activities fee of $164 per academic year for 2021-22.

Summary of Comprehensive Fee

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Fee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Activity Fee</td>
<td>$330</td>
<td>$330</td>
</tr>
<tr>
<td>Health Service Fee</td>
<td>508</td>
<td>557</td>
</tr>
<tr>
<td>Athletic Fee</td>
<td>326</td>
<td>362</td>
</tr>
<tr>
<td>Transportation Services Fee</td>
<td>192</td>
<td>194</td>
</tr>
<tr>
<td>Recreational Sports Fee</td>
<td>327</td>
<td>335</td>
</tr>
<tr>
<td>Student Services Fee</td>
<td>298</td>
<td>302</td>
</tr>
<tr>
<td>Student Cultural Activities Fee</td>
<td>173</td>
<td>164</td>
</tr>
<tr>
<td>Total</td>
<td>$2,154</td>
<td>$2,244</td>
</tr>
</tbody>
</table>
Comprehensive Fee Reduction for On-line Students

In recognition of students living and studying away from the Blacksburg campus, the university recommends a reduction in the comprehensive fee of $300 per semester for full-time students enrolled in an all virtual schedule (or who have only research hours/ independent study not located on campus). Students must certify that they will reside more than 50 miles from the Blacksburg campus for the entire semester. Part-time and special session enrollment may be eligible for derivative reduction using the same eligibility requirements. Students will maintain access to service provided virtually.

Room and Board Charges

The university’s Residential and Dining Programs serve students by providing on-campus housing and dining services. Generally, all entering freshmen must live on campus, and housing is available on a limited basis for returning students who choose to live on campus. The university establishes optional room and board rates based on a derivation of the Board-approved fee to appropriately reflect costs for Summer Session and summer conferences. All students living on campus must select a meal plan, with the exception of students who elect to reside in the Oak Lane – Phase IV housing development; off-campus students may elect to participate in one of the meal plan programs.

Room Fees

An average 1.9 percent increase to room rates on the Blacksburg campus is proposed to cover planned state compensation programs, adjustments to fringe benefit rates, increased hourly wage and salary compensation, utility costs, student affairs support services, equipment and furniture replacement, increased personnel associated with residential hall operations, and residential facilities. Northern Virginia Gallery proposed rates include local operating alignments. The proposed annual room rates by location and room type are listed below:

<table>
<thead>
<tr>
<th>Room Fees</th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Double Occupancy:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Quad (Pre-1983 Dormitories)</td>
<td>5,254</td>
<td>5,356</td>
</tr>
<tr>
<td>Payne Park - Traditional - Double</td>
<td>5,778</td>
<td>5,890</td>
</tr>
<tr>
<td>Main Campbell &amp; Newman - Double Occupancy</td>
<td>5,922</td>
<td>6,036</td>
</tr>
<tr>
<td>Hillcrest - Double Occupancy</td>
<td>6,366</td>
<td>6,490</td>
</tr>
<tr>
<td>O’Shaughnesssy - Traditional Double</td>
<td>6,720</td>
<td>6,850</td>
</tr>
<tr>
<td>East &amp; West Ambler Johnston - Traditional/Efficiency Double</td>
<td>6,778</td>
<td>6,910</td>
</tr>
<tr>
<td>Payne Park - Suite - Double</td>
<td>6,964</td>
<td>7,098</td>
</tr>
<tr>
<td>Payne Park - Suite - Double (Large Suite)</td>
<td>7,132</td>
<td>7,270</td>
</tr>
<tr>
<td>Upper Quad (Pearson &amp; New Cadet Hall)</td>
<td>7,188</td>
<td>7,328</td>
</tr>
<tr>
<td>New Residence Hall West - Double Occupancy</td>
<td>7,294</td>
<td>7,436</td>
</tr>
<tr>
<td>Creativity &amp; Innovation District Residence Hall - Double</td>
<td>N/A</td>
<td>7,500</td>
</tr>
<tr>
<td>East &amp; West Ambler Johnston - Private Bath Double</td>
<td>7,712</td>
<td>7,862</td>
</tr>
<tr>
<td><strong>Single Occupancy:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payne Park - Traditional - Single</td>
<td>7,900</td>
<td>8,052</td>
</tr>
<tr>
<td>Main Campbell &amp; Newman - Single Occupancy</td>
<td>8,042</td>
<td>8,198</td>
</tr>
<tr>
<td>Hillcrest - Single Occupancy</td>
<td>8,654</td>
<td>8,822</td>
</tr>
</tbody>
</table>
Payne Park - Suite - Single         9,606          9,792
New Residence Hall West - Single Occupancy  9,938          10,130
Creativity & Innovation District Residence Hall - Single  N/A          10,200
Other:
Special Purpose Housing         6,556          6,682
Graduate Life Center at Donaldson Brown - Double  7,294          7,436
Oak Lane IV                      7,826          7,978
Graduate Life Center at Donaldson Brown - Single  9,938          10,130
The Gallery (NOVA) - 4-Person Unit  7,150          7,600
The Gallery (NOVA) - 3-Person Unit  7,900          8,200
The Gallery (NOVA) - 2-Person Unit  8,400          8,500

Living Learning Community Fee
The Living Learning Community Fee is an optional charge for students participating in a Living Learning Community in Hoge Hall, East & West Ambler Johnston, Pritchard Hall, Harper Hall, O'Shaughnessy Hall, Peddrew-Yates Hall, Payne Hall, New Residence Hall East, Hillcrest Hall, and Newman Hall and Special Purpose Housing. These residence halls offer unique living and learning opportunities to the student residents who choose to pay the optional annual program fee of $100 to support the cost of operating the program. No increase in the Living Learning Community fee is recommended for 2021-22. Living Learning Community programming will be offered in one additional residence hall in 2021-22: Creativity & Innovation District Residence Hall.

Residential Telecommunications Fee
All students living on campus pay the Residential Telecommunications Fee, which supports residential cable television service, wired network connectivity, and high-performance wireless network coverage. Residential students currently pay $394 annually for telecommunication services. No increase in the Residential Telecommunications Fee is recommended for 2021-22.

Board Fees
Students living on-campus currently have a choice of three types of flexible meal plans. The Flex Plan operates like a debit account with a designated amount for the purchase of food in the dining facilities. Students may deposit cash to their Flex accounts to increase their balance during the year. Consistent with the purchasing power of traditional meal plans, the intent of annual rate changes for the Flex Plans is to hold overall purchasing power constant from year to year.

A 5.6 percent increase is proposed for board fees to cover planned state compensation programs, adjustments to fringe benefit rates, increased food costs, increased hourly wage compensation, utility costs, and facility maintenance and renovation projects. The proposed annual board rates by meal plan program are listed below:

<table>
<thead>
<tr>
<th>Meal Plan Program</th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Flex Plan</td>
<td>$3,908</td>
<td>$4,126</td>
</tr>
<tr>
<td>Mega Flex Plan</td>
<td>4,192</td>
<td>4,426</td>
</tr>
<tr>
<td>Premium Flex Plan</td>
<td>4,484</td>
<td>4,736</td>
</tr>
</tbody>
</table>
Campus Fees

Specialized campus fees are designed to cover costs that are unique to a specific campus. These fees are charges established for a specific campus which are beyond regular tuition and fees and are equal for students, both resident and nonresident.

Northern Virginia Center Student Services Fees

The Comprehensive Fee, which supports a number of on-campus services, is not charged to off-campus students. However, students attending courses at the Northern Virginia Center benefit from several of these services including the infrastructure and use of the wireless network, as well as the issuance and use of student identification cards. The current fee is $148 per academic year. An increase of $3 to $151 for the 2021-22 academic year is recommended to cover network infrastructure renewal.

Roanoke Virginia Tech Carilion School of Medicine Student Services Fees

Students attending courses at the VTCSOM in Roanoke benefit from several of the traditional Comprehensive Fee services including the infrastructure and use of the wireless network and the issuance and use of student identification cards. These students will also have access to health and wellness services, recreational sports, and VTCSOM student government activities.

A $49 increase is recommended for the Student Health Services component to cover counseling and wellness support. A $3 increase is recommended to the Student Services Fee to cover network infrastructure renewal. No change is recommended for the Student Government/Activity Fee. An $8 increase is recommended to the Recreational Sports Fee to support student access to recreational facilities. First, second, and third year medical students, (M1, M2, M3), will be assessed the Recreational Sports Fee. For 2021-22, the following VTCSOM annual student fees are recommended:

<table>
<thead>
<tr>
<th>Fee Description</th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22 Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTCSOM Student Services Fee</td>
<td>$148</td>
<td>$151</td>
</tr>
<tr>
<td>VTCSOM Health Services Fee</td>
<td>472</td>
<td>521</td>
</tr>
<tr>
<td>VTCSOM Student Government/Activity Fee</td>
<td>185</td>
<td>185</td>
</tr>
<tr>
<td>VTCSOM Recreational Sports Fee (FY22 M1, M2, M3)</td>
<td>327</td>
<td>335</td>
</tr>
</tbody>
</table>

Steger Center for International Scholarship Fee Rates

The Steger Center for International Scholarship (the Center) in Riva San Vitale, Switzerland, opened in the Fall of 1993. The Center serves as a resident educational facility for Virginia Tech students from many academic programs. Providing the opportunity for students to study abroad is an important strategy in strengthening the international programs of Virginia Tech, an objective of both the university and the commonwealth.

For purposes of financing the operations of the Center, two separate programs are maintained. First, all instructional costs are accounted for in the Educational and General program of the University Division. Second, the housing, dining, and student activity auxiliary enterprise programs
are recorded within the university’s Residential and Dining Hall System. The Ferrari Foundation, the university’s Swiss subsidiary corporation, manages the day-to-day activities of the Center.

Students attending the Steger Center for International Scholarship are assessed the same tuition as on-campus students, and it is recommended that this tuition policy continue.

For housing and dining services at the Center, the proposed fees are higher than on-campus rates to reflect the higher cost of living at the Center. Students are not required to pay the Blacksburg campus Comprehensive Fee while studying abroad. A student activity fee supports students with community-building social and recreational events and activities. The current Steger Center Room & Board charge is $7,100 per academic year, and the current Steger Center Student Activity Fee is $100 per academic year. No increase is proposed in the Steger Center Student Activity Fee is recommended for the 2021-22 academic year. An increase of $300 to assist with currency exchange valuation is recommended in the Steger Center Room and Board Costs for the 2021-22 academic year.

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22 Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steger Center Student Activity Fee</td>
<td>$100</td>
<td>$100</td>
</tr>
<tr>
<td>Steger Center Room &amp; Board Costs</td>
<td>$7,100</td>
<td>$7,400</td>
</tr>
</tbody>
</table>

**Washington-Alexandria Architecture Center Fee**

To support the cost of operations and ensure the quality of the Washington-Alexandria Architecture Center (WAAC), the college recommended that a supplemental fee be assessed to Virginia Tech and WAAC Consortium students in residence at the center on a per-semester basis. This Educational & General fee helps manage the cost of instructional facilities and equipment and support students in their academic efforts in the robust curricular environment of the WAAC. No change in the per-semester fee is recommended for 2021-22, as shown below:

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22 Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time</td>
<td>$300</td>
<td>$300</td>
</tr>
<tr>
<td>Part-time</td>
<td>150</td>
<td>150</td>
</tr>
</tbody>
</table>

**Supplemental Program Fees**

Supplemental Program Fees are designed to cover costs that are unique to a specific discipline. To maintain the intent of the commonwealth’s funding policies regarding the collection and allocation of tuition revenues, Program Fees are charges established for a specific program which are beyond regular tuition and fees and are equal for students, both resident and nonresident.

**Architecture + Design Fee**

Architecture, industrial design, interior design, and landscape architecture students in the School of Architecture + Design need access to appropriate studio equipment, academic programming, and technology. Since Fall 2008, the university has recognized this differential cost of instruction for students with majors in the School of Architecture + Design through a supplemental program fee. This fee supports costs that are unique to Architecture + Design students including: the updating of equipment and materials for instructional studios, student projects, quality
enhancements, and operational support of instructional studios. No change in the supplemental fee is recommended for students admitted prior to Fall 2018. For students admitted in Fall 2018 and later, continuation of the annual fee of $1,500 is recommended, as displayed below. The new rate will be assessed to all Architecture + Design students by Fall 2022.

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entered Prior to Fall 2018</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>$949.00</td>
<td>$949.00</td>
</tr>
<tr>
<td>Part-time</td>
<td>474.50</td>
<td>474.50</td>
</tr>
<tr>
<td><strong>Entering Fall 2018 &amp; Later</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>1,500.00</td>
<td>1,500.00</td>
</tr>
<tr>
<td>Part-time</td>
<td>750.00</td>
<td>750.00</td>
</tr>
</tbody>
</table>

**Building Construction Fee**

To ensure that the Myers Lawson School of Construction has adequate resources to staff, equip, and enhance the provisions of the Building Construction program, an annual program fee is proposed to recognize the differential cost of instruction for students in the Building Construction major. This fee is important for ensuring the necessary resources to support costs unique to Building Construction students and continued program quality including the continuing need for modernization of equipment and instrumentation for instructional space and student projects, staffing needs of the BUILD lab, required upgrades to lab space, and adequate staff support to ensure the effective maintenance of equipment and technology in the daily operation of the lab. No change in the supplemental fee is recommended for students admitted prior to Fall 2018. For students admitted in Fall 2018 and later, continuation of the annual fee of $1,500 is recommended, as displayed below. The new rate will be assessed to all Building Construction students by Fall 2022.

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entered Prior to Fall 2018</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>$775.00</td>
<td>$775.00</td>
</tr>
<tr>
<td>Part-time</td>
<td>387.50</td>
<td>387.50</td>
</tr>
<tr>
<td><strong>Entering Fall 2018 &amp; Later</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>1,500.00</td>
<td>1,500.00</td>
</tr>
<tr>
<td>Part-time</td>
<td>750.00</td>
<td>750.00</td>
</tr>
</tbody>
</table>

**Engineering Fee**

To ensure that engineering students continue to receive a state-of-the-art education in a quality learning environment, the university began recognizing the higher cost of instruction in the College of Engineering (COE) through the establishment of a supplemental fee in fall 2007. This fee supports costs that are unique to College of Engineering students including: the continuing need for modernization of instrumentation and materials for instructional laboratories and student projects, instructional space costs, effective maintenance of instrumentation and technology, quality enhancements, and operation of the instructional laboratories. No change in the
supplemental fee is recommended for students admitted prior to Fall 2018. For students admitted in Fall 2018 and later, continuation of the annual fee of $2,000 is recommended, as displayed below. The new rate will be assessed to all College of Engineering students by Fall 2022.

<table>
<thead>
<tr>
<th>Entered Prior to Fall 2018</th>
<th>2020-21</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>$775.00</td>
<td>$775.00</td>
</tr>
<tr>
<td>Part-time</td>
<td>387.50</td>
<td>387.50</td>
</tr>
<tr>
<td>Graduate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>1,049.00</td>
<td>1,049.00</td>
</tr>
<tr>
<td>Part-time</td>
<td>524.50</td>
<td>524.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Entering Fall 2018 &amp; Later</th>
<th>2020-21</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate and Graduate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>2,000.00</td>
<td>2,000.00</td>
</tr>
<tr>
<td>Part-time</td>
<td>1,000.00</td>
<td>1,000.00</td>
</tr>
</tbody>
</table>

### Pamplin College of Business Fee

Delivering a high-quality business education requires the resources to address costs unique to the Pamplin College of Business. To ensure continued excellence in the Pamplin College of Business, a per-credit hour fee was established in 2013-14 to provide dedicated resources to be utilized exclusively for the Pamplin College of Business. The fee was increased to $75 per credit hour beginning in Fall 2018, and the university recommends a continued phasing-in of the $75 per credit hour fee to 4000 level courses in 2021-22.

<table>
<thead>
<tr>
<th>Course Level</th>
<th>2020-21</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000, 2000, and 3000 Level Courses</td>
<td>$75.00/hour</td>
<td>$75.00/hour</td>
</tr>
<tr>
<td>4000 Level Courses</td>
<td>$25.00/hour</td>
<td>$75.00/hour</td>
</tr>
</tbody>
</table>

### Agriculture Fee

To ensure that the College of Agriculture has adequate resources to deliver cutting-edge, high-quality instruction and maintain critical laboratory facilities and equipment, an annual program fee was established for students in the College of Agriculture. For students admitted in Fall 2018 and later, continuation of the annual fee of $750 is recommended, as displayed below. The new rate will be assessed to all College of Agriculture students by Fall 2022.

<table>
<thead>
<tr>
<th>Entering Fall 2018 &amp; Later</th>
<th>2020-21</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate and Graduate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>$750.00</td>
<td>$750.00</td>
</tr>
<tr>
<td>Part-time</td>
<td>375.00</td>
<td>375.00</td>
</tr>
</tbody>
</table>
Course Specific Charges

The university may establish course specific charges for study abroad costs, field trips, course materials, laboratory cost, or other extraordinary costs tied to individual courses. The university avoids establishing course charges for materials and laboratory charges in programs with specialized program fees.

Graduate Degree Program Fees

Specialized graduate degree programs provide a valuable service by meeting targeted educational and professional development needs. Because both the academic units and the university have added costs associated with providing high demand specialized graduate degree programs, specialized graduate program fees address these incremental college and university costs required to deliver high quality programs. To maintain the intent of the commonwealth’s funding policies regarding the collection and allocation of tuition revenues, Specialized Graduate Program Fees are charges established for a specific graduate program, potentially at a specific location, beyond regular tuition and fees and are equal for students, both resident and nonresident.

Veterinary Medicine Facility Fee

Capital improvements have enhanced the College of Veterinary Medicine instructional space. Increased and enhanced facilities were necessary for the recruitment and retention of high-quality faculty and students. All Veterinary Medicine students are assessed a facility fee. Proceeds from the facility fee will be used exclusively for College of Veterinary Medicine instructional space improvements. No change in the fee is recommended for 2021-22, as displayed below.

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veterinary Medicine Facility Fee</td>
<td>$1,200.00</td>
<td>$1,200.00</td>
</tr>
</tbody>
</table>

Master of Public Health (MPH) Fee

The MPH fee provides resources for program-specific course development, faculty and leadership support, and instructional needs. No increase in the fee is recommended for 2021-22, as displayed below.

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time</td>
<td>$525.00</td>
<td>$525.00</td>
</tr>
<tr>
<td>Part-time</td>
<td>262.50</td>
<td>262.50</td>
</tr>
</tbody>
</table>

Master of Business Administration Fee

The Master of Business Administration (MBA) program fee, aligns pricing of the Virginia Tech MBA program and provides funding for the college’s academic program and enhanced career placement services for students. This fee applies to students in the EvMBA and OMBA programs,
yet is not assessed to Executive MBA or Professional MBA students (which have separate rate structures). No increase is recommended for 2021-22, as presented below:

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBA (On/Off-Campus)</td>
<td>$175.00/hour</td>
<td>$175.00/hour</td>
</tr>
</tbody>
</table>

**Master of Science in Business Administration (MSBA) Fee**

To ensure the Pamplin College of Business MSBA programs in Business Analytics (BA) and Hospitality & Tourism Management (HTM) are positioned to deliver high-quality instruction and provide experiential learning opportunities and career services to students, the university recognizes the differential cost of the MSBA-BA and MSBA-HTM programs through the assessment of a supplemental E&G program fee. This fee is assessed on a per-credit hour basis for each credit hour taken by the student. No increase is recommended for 2021-22, as presented below:

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Analytics (BA),</td>
<td>$175.00/hour</td>
<td>$175.00/hour</td>
</tr>
<tr>
<td>Hospitality &amp; Tourism Management (HTM)</td>
<td>175.00/hour</td>
<td>175.00/hour</td>
</tr>
</tbody>
</table>

**Professional & Executive Model Graduate Degree Program Fees**

While similar to specialized graduate program fees, the industry standard for this type of professional education program is to be quoted in terms of a total cost for the entire program period. Programs generally span from 12 to 24 months. A new multi-year total cost is developed for each incoming cohort. The annual program fees are established as the difference between applicable tuition and fees and the total cost during the cohort period. The program fee for a cohort’s second year is established when tuition and fee rates are established for that year; this can be impacted by various factors including cost assignments by the General Assembly, but are designed to honor the previously quoted total cost of the entire program period. Each Executive Model program and its total cost proposal are summarized below.

**Professional Master of Business Administration (PMBA) Supplemental Fee**

The PMBA program is intended for experienced working professionals to complete an MBA on a part-time basis in an accelerated format. The program is designed on the cohort model with face-to-face weekend classes (in Richmond, Roanoke, and Hampton Roads) while leveraging online technology for supplemental instructional delivery to provide flexibility for busy working professionals to complete the program over a two-year period. The Fall 2020 entering cohort is the last cohort of PMBA students; the Online MBA (OMBA) will enroll new students in its place beginning in summer 2021. The total program cost proposed for resident and Nonresident students in the PMBA program is displayed below:
<table>
<thead>
<tr>
<th>Fall 2020 Cohort</th>
<th>Two-Year Program Cost</th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMBA Total Cost - Resident</td>
<td>$45,050.00</td>
<td>$22,525.00</td>
<td>$22,525.00</td>
</tr>
<tr>
<td>(less) Off-Campus Tuition &amp; Fees (*)</td>
<td>(15,342.00)</td>
<td>(15,787.00)</td>
<td></td>
</tr>
<tr>
<td>PMBA Fee - 2020 Resident</td>
<td>$7,183.00</td>
<td>$6,738.00</td>
<td></td>
</tr>
</tbody>
</table>

| PMBA Total Cost –Nonresident | $65,707.00 | $32,854.00 | $32,853.00 |
| (less) Off-campus Tuition & Fees (*) | (30,338.00) | (31,200.00) |
| PMBA Fee – 2020 Nonresident | 2,516.00 | 1,653.00 |

(*) Ext Graduate tuition rate w/o relief

**Executive Graduate Tuition and Fees**

For new cohorts beginning in 2016-17 in the Ph.D. in Executive Business Research and Executive Master of Natural Resources, the university established an Executive Graduate tuition & fee structure comprised of Executive Graduate Tuition, the Technology Fee, the Library Fee, a Facility & Equipment Fee, and a program-specific supplemental fee. The Spring 2021 cohort of XMNR will be last XMNR cohort using this rate (new XMNR cohorts will use the Professional Graduate Tuition Rate). Executive Graduate Tuition is assessed on a per-credit basis for all credits enrolled. BXBR will continue to use the Executive Graduate tuition & fee structure. Continuing this structure for 2021-22 is recommended. Full-Time semester rates are one-half of the full-time annual rates.

| 2021-22 |
|------------------------|------------------------|
| Executive Graduate Tuition (per-credit) | $1,689.75 |
| Technology Fee (annual) | 78 |
| Library Fee (annual) | 102 |
| Facility & Equipment Fee (annual) | 604 |
| Program-Specific Supplemental Fee | Various |

**Executive Master of Natural Resources (XMNR) Supplemental Fee**

In 2010-11, the College of Natural Resources expanded the existing Master of Natural Resources program delivered in the National Capital Region by adding an executive format cohort. The program is an accelerated graduate degree for working professionals with significant management experience. Program adjustments for the Spring 2022 starting cohort reduce the program cost by $5,000 to a total cost of $41,500. Cohorts starting before 2022 utilize the Executive Graduate tuition rate and a cohort-specific program fee to achieve a total cost for the program. Beginning in Spring 2022, cohorts will utilize the Professional Masters tuition rate to achieve the total program cost. Tuition is assessed on all credits taken. Each cohort’s pricing is summarized below.
## PhD in Executive Business Research (BXBR) Supplemental Fee

The Pamplin College of Business launched a new Ph.D. in Business with a concentration in Executive Business Research that started in Fall 2016. The three-year program is administered through the College’s Falls Church facility in the National Capital Region and provides business professionals with rigorous training in analytical and research techniques, exposure to the scholarly literature in business, and dissertation research experience that is translational in nature. The degree is marketed as a total cost program, spreading the advertised total cost over three academic years. Each new cohort will be established with Executive Graduate tuition & fees and a per-credit hour BXBR program to achieve the proposed total cost summarized below. This program fee will be assessed on a per credit hour basis in order to provide flexibility in a student’s plan of study. Students taking more than the scheduled three years will continue to pay the Executive Tuition and fee rates and the BXBR supplemental fee established for their cohort.

<table>
<thead>
<tr>
<th>Fall 2016 Cohort</th>
<th>Total Program Cost</th>
<th>2019-20</th>
<th>2020-21</th>
<th>2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>BXBR Program Fee - Per Credit</td>
<td>$365.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fall 2017 Cohort</th>
<th>Total Program Cost</th>
<th>2019-20</th>
<th>2020-21</th>
<th>2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>BXBR Program Fee - Per Credit</td>
<td>$323.50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fall 2018 Cohort</th>
<th>Total Program Cost</th>
<th>2019-20</th>
<th>2020-21</th>
<th>2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>BXBR Program Fee - Per Credit</td>
<td>$323.50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fall 2019 Cohort</th>
<th>Total Program Cost</th>
<th>2019-20</th>
<th>2020-21</th>
<th>2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td>BXBR Total Program Cost</td>
<td>$135,000.00</td>
<td>$45,000.00</td>
<td>$45,000.00</td>
<td>$45,000.00</td>
</tr>
<tr>
<td>(less) Executive Graduate T&amp;F</td>
<td>(33,606.75)</td>
<td>(33,857.00)</td>
<td>(34,589.75)</td>
<td></td>
</tr>
</tbody>
</table>
### Executive Master of Business Administration (EMBA)

The EMBA program is tailored for business leaders to complete an MBA in an accelerated format. The program is designed on the cohort model with face-to-face classes every other weekend (in Arlington) to provide flexibility for busy working professionals to complete the program over a 18-month period. The program’s total cost is the same for resident and nonresident students. Tuition for this program does not utilize the aforementioned tuition and fee rates, but rather assesses the total program cost in six installments to accommodate corporate sponsorship of employee tuition. For 2021-22, a total cost of $95,000 is recommended.

### Graduate Tuition Pricing Basis

As the university continues to develop and offer targeted educational opportunities to meet student and market demand, the university may elect to utilize per-credit hour tuition pricing in lieu of the traditional full/part-time pricing approach in situations where such pricing better aligns with the program delivery model. A leading example is accelerated master degrees where credit hours delivered significantly exceeds the level planned through traditional full-time programs.
Parking Fee

The General Assembly directed institutions of higher education to organize parking services as an auxiliary enterprise operation in 1989. The expenditure of General Fund dollars for the maintenance or improvement of parking lots and facilities was prohibited. Accordingly, Virginia Tech established the Parking Services Auxiliary Enterprise at the beginning of fiscal year 1989-90 and instituted a fee for faculty, staff, and students who parked in campus lots.

An average increase of 4.2 percent in the parking rate is recommended for the 2021-22 academic year. This increase is needed to cover planned state compensation programs, adjustments to fringe benefit rates, utility costs, and operating costs. The university also proposes to continue to provide a parking rate discount to encourage car-pooling and remote lot parking in an effort to reduce the amount of vehicular traffic on campus. Annual student parking fees at other Virginia doctoral institutions for 2020-21 range from $272 to $826 for students, dependent upon the type and proximity of parking facilities.

<table>
<thead>
<tr>
<th>Parking Permit Type</th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
<th>$ Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty/Staff</td>
<td>$360</td>
<td>$375</td>
<td>$15</td>
<td>4.2%</td>
</tr>
<tr>
<td>Commuter/Graduate Student</td>
<td>315</td>
<td>330</td>
<td>15</td>
<td>4.8%</td>
</tr>
<tr>
<td>Commuter/Graduate Premium</td>
<td>415</td>
<td>430</td>
<td>15</td>
<td>3.6%</td>
</tr>
<tr>
<td>Residential Student</td>
<td>450</td>
<td>470</td>
<td>20</td>
<td>4.4%</td>
</tr>
</tbody>
</table>

History of Tuition Legislation in Virginia

The period of 1989 to the present has been one of significant change in the level of state support, tuition policies, and rates. The substantial growth in tuition continues to be a source of increasing concern to institutions of higher education, students, parents, and state officials.

During the period of 1989 to 1996, tuition increased dramatically across the commonwealth due to the decline in General Fund support for higher education. At Virginia Tech, undergraduate tuition increased by 49 percent for resident students and 91 percent for nonresident students in the six-year period 1989-90 to 1995-96, a direct result of six rounds of reductions in state General Fund support.

In 1994 the Appropriation Act included language which established tuition rate growth caps of 3 percent for resident students and 7.5 percent for nonresident students for each year of the biennium. For 1996-97 through 1998-99, the Appropriation Act included language to freeze tuition for Virginia undergraduates at the 1995-96 level. The 1999 General Assembly approved a 20 percent reduction in tuition and mandatory Educational and General fees for Virginia undergraduate students and offset the reduction in revenue by providing new General Fund support. The 2000 Appropriation Act included language to continue tuition and mandatory Educational and General fees at 1999-00 levels for Virginia undergraduate students during the 2000-02 biennium.

To address state revenue shortfalls, language in the 2002 Appropriation Act provided authority to increase tuition and mandatory Educational and General fees for Virginia undergraduate students by 9 percent. The 2003 General Assembly allowed for the annualization of the Spring 2003 tuition increases and limited increases in tuition and mandatory Educational and General fees for Fall 2003 for Virginia undergraduate students to 5 percent plus nongeneral fund cost assignments.
The authority granted by the 2004 General Assembly continues, and establishes that “The Board of Visitors . . . of institutions of higher education may set tuition and fee charges at levels they deem to be appropriate for all resident student groups based on, but not limited to, competitive market rates, provided that the total revenue generated by the collection of tuition and fees from all students is within the nongeneral fund appropriation for educational and general programs provided in the act.”

Effective July 1, 2006, the university entered into a management agreement with the Commonwealth of Virginia. A critical element of this agreement is the reaffirmation of the Board of Visitors’ authority to establish tuition and fee rates. This rate setting authority, coupled with the sum sufficient revenue authority to establish nongeneral fund appropriations as provided in the management agreement, provides a much more stable environment for planning and establishment of future tuition and fee rates.

For 2007-08, the 2007 General Assembly established a Tuition Incentive for allocation to institutions contingent upon limiting the increase of tuition and E&G fees for in-state undergraduate students to 6 percent plus in-state undergraduate financial aid. The 2008 General Assembly continued the incentive fund concept to encourage institutions to limit the in-state undergraduate tuition and E&G fee increases to 3 percent for E&G operations and 1 percent for student financial aid in 2008-09.

Language included in the 2009 budget, and continued in 2010, reiterated the intent of the federal American Recovery and Reinvestment Act of 2009 (ARRA) to “mitigate the need to raise tuition on in-state students at public colleges and universities.” As a result of this Act, the University division received over $11 million in funding in 2009-10. This funding came along with an understanding, expressed verbally by state budget-writers, that higher education institutions would use ARRA funding to mitigate the need to increase tuition to Virginia residents beyond 5 percent.

The Governor’s Commission on Higher Education, Reform, Innovation, and Investment introduced the Higher Education Opportunity Act of 2011 at the start of the 2011 General Assembly. In this legislation, institutional tuition and fee-setting authority is retained by the Board of Visitors. However, total tuition and fee revenue is limited to the aggregate cost of education for all enrolled students, minus state General Fund support. The model does allow for exclusion of Virginia resident tuition and fee revenue directed towards financial aid, an institution’s nongeneral fund share of the state mandated salary and fringe increases, improving faculty salary competitiveness, and unavoidable cost increases to ensure flexibility and inclusion of specific institutional characteristics, missions, and goals. The university is in compliance with this test; thus, the Board of Visitors retains the authority to set tuition and fee levels.

For 2019-20, the 2019 General Assembly approved a pool of funds to support “In-State Undergraduate Affordability”. Allocations of this pool are to be granted to public institutions in Virginia that maintain tuition and mandatory Educational & General (E&G) fees for in-state undergraduate students to the same levels as in 2018-19. Accepting the funding and holding in-state undergraduate tuition and E&G fees level was optional. Virginia Tech and all four-year public universities in the commonwealth accepted the funding and held in-state undergraduate tuition level for the 2019-20 academic year.
Mitigation of Tuition Dependency

Tuition increases are one component of the university’s overall resource and budget development strategy. To mitigate dependency on tuition the university continuously explores opportunities to maintain and grow enrollment in strategic market-informed disciplines and locations, invests in quality enhancements to ensure the value of a Virginia Tech degree, and seeks to diversify revenue by leveraging non-tuition sources including philanthropy and entrepreneurial activities. Tuition provides a significant portion of the university’s E&G revenue, and the price elasticity of demand is an ever-present consideration in the development process.

Summary of Tuition and Fee Rates

A summary of the recommended tuition rates is shown on Schedules 1 and 2, and a summary of fees is attached on Schedules 3 and 4. Finally, the total of all mandatory costs for students to attend Virginia Tech is detailed on Schedule 5 for undergraduate students, Schedule 6 for graduate students, and Schedule 7 for professional degree students.

RECOMMENDATION:

That the proposed tuition and fee rates be approved, effective Fall Semester 2021.

March 22, 2021
### RECOMMENDATION

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge Base</th>
<th>Proposed 2021-22</th>
<th>Rate Increase $</th>
<th>%</th>
<th>28% One-time Relief</th>
<th>Net Increase</th>
<th>Proposed 2021-22 Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Undergraduate Students</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>$11,420</td>
<td>$11,751</td>
<td>$331</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>$11,658</td>
</tr>
<tr>
<td>Nonresident</td>
<td>29,960</td>
<td>30,829</td>
<td>869</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>30,584</td>
</tr>
<tr>
<td><strong>Graduate Students</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-Campus Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>13,701</td>
<td>14,098</td>
<td>397</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>13,986</td>
</tr>
<tr>
<td>Nonresident</td>
<td>27,614</td>
<td>28,415</td>
<td>801</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>28,189</td>
</tr>
<tr>
<td>Off-Campus Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>15,167</td>
<td>15,607</td>
<td>440</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>15,483</td>
</tr>
<tr>
<td>Nonresident</td>
<td>29,559</td>
<td>30,416</td>
<td>857</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>30,174</td>
</tr>
<tr>
<td><strong>Veterinary Medicine</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Virginia/Maryland</td>
<td>21,906</td>
<td>22,462</td>
<td>556</td>
<td>2.5%</td>
<td>(0.7%)</td>
<td>1.8%</td>
<td>22,305</td>
</tr>
<tr>
<td>Nonresident</td>
<td>50,435</td>
<td>51,459</td>
<td>1,024</td>
<td>2.0%</td>
<td>(0.6%)</td>
<td>1.5%</td>
<td>51,170</td>
</tr>
<tr>
<td><strong>VTC School of Medicine</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>53,113</td>
<td>54,653</td>
<td>1,540</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
<td>54,219</td>
</tr>
</tbody>
</table>

*Presentation Date: March 21, 2021*
### VIRGINIA TECH
#### 2021-22 SPECIAL TUITION RATES
##### SUMMARY OF HOURLY RATES

<table>
<thead>
<tr>
<th>Schedule 2</th>
<th>Proposed 2021-22</th>
<th>Increase</th>
<th>28%</th>
<th>One-time Relief</th>
<th>Net Increase</th>
<th>Proposed 2021-22 Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Part-Time Students (a)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate Students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>$475.75</td>
<td>$489.75</td>
<td>$14.00</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td>Nonresident</td>
<td>1,248.25</td>
<td>1,284.50</td>
<td>36.25</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td>Graduate Students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-Campus Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>761.25</td>
<td>783.25</td>
<td>22.00</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td>Nonresident</td>
<td>1,534.00</td>
<td>1,578.50</td>
<td>44.50</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td>Off-Campus Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resident</td>
<td>842.50</td>
<td>867.00</td>
<td>24.50</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td>Nonresident</td>
<td>1,642.25</td>
<td>1,689.75</td>
<td>47.50</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td>Summer and Winter Sessions</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>On-Campus Programs</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Undergraduate Resident</td>
<td>428.25</td>
<td>440.75</td>
<td>12.50</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td>Undergraduate Nonresident</td>
<td>1,123.00</td>
<td>1,156.00</td>
<td>33.00</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td>Online Graduate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Tier 1</td>
<td>-</td>
<td>1,075.00</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Tier 2</td>
<td>975.00</td>
<td>1,000.00</td>
<td>25.00</td>
<td>2.6%</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Tier 3</td>
<td>900.00</td>
<td>925.00</td>
<td>25.00</td>
<td>2.8%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Tier 4</td>
<td>825.00</td>
<td>850.00</td>
<td>25.00</td>
<td>3.0%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Online Master of Business Administration (OMBA) (b)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Master of Information Technology (MIT)</td>
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<tr>
<td>Master of Agricultural and Applied Economics</td>
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<tr>
<td>Master of Natural Resources (MNR)</td>
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<tr>
<td>Master of Agriculture and Life Sciences (OMALS)</td>
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<tr>
<td>Graduate Certificate in Local Government Mgt (LGMC)</td>
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<tr>
<td>Graduate Certificate in Leadership for an Aging Society (ASCC)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Professional/Executive Graduate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Graduate Tuition Rate (EvMBA, DAAS, MSBA-HTM, XMNR)</td>
<td>1,025.00</td>
<td>1,050.00</td>
<td>25.00</td>
<td>2.4%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Executive Graduate Tuition Rate (BXBR)</td>
<td>1,642.25</td>
<td>1,689.75</td>
<td>47.50</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td>School Personnel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate Resident</td>
<td>357.00</td>
<td>367.25</td>
<td>10.25</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td>Graduate Resident</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blacksburg Campus</td>
<td>571.00</td>
<td>587.50</td>
<td>16.50</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td>Extended Campus</td>
<td>632.00</td>
<td>650.25</td>
<td>18.25</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td>Study Abroad Programs (c)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate Resident</td>
<td>381.00</td>
<td>391.75</td>
<td>10.75</td>
<td>2.8%</td>
<td>(0.8%)</td>
<td>2.0%</td>
</tr>
<tr>
<td>Undergraduate Nonresident</td>
<td>999.00</td>
<td>1,027.50</td>
<td>28.50</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.0%</td>
</tr>
<tr>
<td>Graduate Resident</td>
<td>609.00</td>
<td>626.50</td>
<td>17.50</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td>Graduate Nonresident</td>
<td>1,227.00</td>
<td>1,262.75</td>
<td>35.75</td>
<td>2.9%</td>
<td>(0.8%)</td>
<td>2.1%</td>
</tr>
<tr>
<td>Graduate Candidacy Status (d)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Resident Blacksburg</td>
<td>-</td>
<td>705.00</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Graduate Nonresident Blacksburg</td>
<td>-</td>
<td>1,420.75</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Graduate Resident Extended Campus</td>
<td>-</td>
<td>780.25</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Graduate Nonresident Extended Campus</td>
<td>-</td>
<td>1,520.75</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

(a) Part-time tuition charges for all student categories are derived from the full-time rate and are directly related to the number of credit hours taken. For tuition calculation purposes, the full-time undergraduate semester rate is divided by 12 credit hours and the full-time graduate student semester rate is divided by 9 hours.

(b) Rate effective beginning Summer semester 2021.

(c) Tuition rates for study abroad do not include students studying at the Steger Center for International Scholarship.

(d) Graduate Candidacy Status is a reduced tuition rate for doctoral students taking research and dissertation hours after completing two years of course work and passing their preliminary exam.

Presentation Date: March 21, 2021
### Educational and General Fee

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge</th>
<th>2021-22 Proposed Charge</th>
<th>Increase</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology Service Fee</td>
<td>$76</td>
<td>$78</td>
<td>$2</td>
<td>2.6%</td>
</tr>
<tr>
<td>Library Fee</td>
<td>99</td>
<td>102</td>
<td>3</td>
<td>3.0%</td>
</tr>
<tr>
<td>Commonwealth Facility &amp; Equipment Fee (Nonresident Students)</td>
<td>604</td>
<td>604</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Immigration Services Fee (International Students)</td>
<td>550</td>
<td>550</td>
<td>0</td>
<td>0.0%</td>
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</table>

### Comprehensive Fee

<table>
<thead>
<tr>
<th>Fee</th>
<th>2020-21 Charge</th>
<th>2021-22 Proposed Charge</th>
<th>Increase</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Activity Fee</td>
<td>330</td>
<td>330</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Health Service Fee</td>
<td>508</td>
<td>557</td>
<td>49</td>
<td>9.6%</td>
</tr>
<tr>
<td>Athletic Fee</td>
<td>326</td>
<td>362</td>
<td>36</td>
<td>11.0%</td>
</tr>
<tr>
<td>Transportation Services Fee</td>
<td>192</td>
<td>194</td>
<td>2</td>
<td>1.0%</td>
</tr>
<tr>
<td>Recreational Sports Fee</td>
<td>327</td>
<td>335</td>
<td>8</td>
<td>2.4%</td>
</tr>
<tr>
<td>Student Services Fee</td>
<td>298</td>
<td>302</td>
<td>4</td>
<td>1.3%</td>
</tr>
<tr>
<td>Student Cultural Activities Fee</td>
<td>173</td>
<td>164</td>
<td>9</td>
<td>(5.2%)</td>
</tr>
<tr>
<td><strong>Total Comprehensive Fee</strong></td>
<td><strong>2,154</strong></td>
<td><strong>2,244</strong></td>
<td><strong>90</strong></td>
<td><strong>4.2%</strong></td>
</tr>
</tbody>
</table>

### Campus Fees

<table>
<thead>
<tr>
<th>Fee</th>
<th>2020-21 Charge</th>
<th>2021-22 Proposed Charge</th>
<th>Increase</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Virginia Center Student Services</td>
<td>148</td>
<td>151</td>
<td>3</td>
<td>2.0%</td>
</tr>
<tr>
<td>Roanoke VTCSOM Student Services Fee</td>
<td>148</td>
<td>151</td>
<td>3</td>
<td>2.0%</td>
</tr>
<tr>
<td>Roanoke VTCSOM Health Services Fee</td>
<td>472</td>
<td>521</td>
<td>49</td>
<td>10.4%</td>
</tr>
<tr>
<td>Roanoke VTCSOM Student Gov/Student Activity Fee</td>
<td>185</td>
<td>185</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Roanoke VTCSOM Recreational Sports Fee (M1, M2, and M3)</td>
<td>327</td>
<td>335</td>
<td>8</td>
<td>2.4%</td>
</tr>
<tr>
<td>Steger Center Student Activity Fee</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Steger Center (Room &amp; Board)</td>
<td>7,100</td>
<td>7,400</td>
<td>300</td>
<td>4.2%</td>
</tr>
<tr>
<td>Washington-Alexandria Architecture Center Fee</td>
<td>300</td>
<td>300</td>
<td>0</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

### Room Fees

**Double Occupancy:**

<table>
<thead>
<tr>
<th>Dormitory</th>
<th>2020-21 Charge</th>
<th>2021-22 Proposed Charge</th>
<th>Increase</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Quad (Pre-1983 Dormitories)</td>
<td>5,254</td>
<td>5,356</td>
<td>102</td>
<td>1.9%</td>
</tr>
<tr>
<td>Payne Park - Traditional - Double</td>
<td>5,778</td>
<td>5,890</td>
<td>112</td>
<td>1.9%</td>
</tr>
<tr>
<td>Main Campbell &amp; Newman - Double Occupancy</td>
<td>5,922</td>
<td>6,036</td>
<td>114</td>
<td>1.9%</td>
</tr>
<tr>
<td>Hillcrest - Double Occupancy</td>
<td>6,366</td>
<td>6,490</td>
<td>124</td>
<td>1.9%</td>
</tr>
<tr>
<td>O'Shaughnessy - Traditional Double</td>
<td>6,720</td>
<td>6,850</td>
<td>130</td>
<td>1.9%</td>
</tr>
<tr>
<td>East &amp; West Ambler Johnston - Traditional/Efficiency Double</td>
<td>6,778</td>
<td>6,910</td>
<td>132</td>
<td>1.9%</td>
</tr>
<tr>
<td>Payne Park - Suite - Double</td>
<td>6,964</td>
<td>7,098</td>
<td>134</td>
<td>1.9%</td>
</tr>
<tr>
<td>Payne Park - Suite - Double (Large Suite)</td>
<td>7,132</td>
<td>7,270</td>
<td>138</td>
<td>1.9%</td>
</tr>
<tr>
<td>Upper Quad (Pearson &amp; New Cadet Hall)</td>
<td>7,188</td>
<td>7,328</td>
<td>140</td>
<td>1.9%</td>
</tr>
<tr>
<td>New Residence Hall West - Double Occupancy</td>
<td>7,294</td>
<td>7,436</td>
<td>142</td>
<td>1.9%</td>
</tr>
<tr>
<td>Creativity &amp; Innovation District Residence Hall - Double</td>
<td>N/A</td>
<td>7,500</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>East &amp; West Ambler Johnston - Private Bath Double</td>
<td>7,712</td>
<td>7,862</td>
<td>150</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

**Single Occupancy:**

<table>
<thead>
<tr>
<th>Dormitory</th>
<th>2020-21 Charge</th>
<th>2021-22 Proposed Charge</th>
<th>Increase</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payne Park - Traditional - Single</td>
<td>7,900</td>
<td>8,052</td>
<td>152</td>
<td>1.9%</td>
</tr>
<tr>
<td>Main Campbell &amp; Newman - Single Occupancy</td>
<td>8,042</td>
<td>8,198</td>
<td>156</td>
<td>1.9%</td>
</tr>
<tr>
<td>Hillcrest - Single Occupancy</td>
<td>8,654</td>
<td>8,822</td>
<td>168</td>
<td>1.9%</td>
</tr>
<tr>
<td>Payne Park - Suite - Single</td>
<td>9,606</td>
<td>9,792</td>
<td>186</td>
<td>1.9%</td>
</tr>
<tr>
<td>New Residence Hall West - Single Occupancy</td>
<td>9,938</td>
<td>10,130</td>
<td>192</td>
<td>1.9%</td>
</tr>
<tr>
<td>Creativity &amp; Innovation District Residence Hall - Single</td>
<td>N/A</td>
<td>10,200</td>
<td>N/A</td>
<td>N/A</td>
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</tbody>
</table>

**Other:**

<table>
<thead>
<tr>
<th>Dormitory</th>
<th>2020-21 Charge</th>
<th>2021-22 Proposed Charge</th>
<th>Increase</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Purpose Housing</td>
<td>6,556</td>
<td>6,682</td>
<td>126</td>
<td>1.9%</td>
</tr>
<tr>
<td>Graduate Life Center at Donaldson Brown - Double</td>
<td>7,294</td>
<td>7,436</td>
<td>142</td>
<td>1.9%</td>
</tr>
<tr>
<td>Oak Lane IV</td>
<td>7,826</td>
<td>7,978</td>
<td>152</td>
<td>1.9%</td>
</tr>
<tr>
<td>Graduate Life Center at Donaldson Brown - Single</td>
<td>9,938</td>
<td>10,130</td>
<td>192</td>
<td>1.9%</td>
</tr>
<tr>
<td>The Gallery (NOVA) - 4-Person Unit</td>
<td>7,150</td>
<td>7,600</td>
<td>450</td>
<td>6.3%</td>
</tr>
<tr>
<td>The Gallery (NOVA) - 3-Person Unit</td>
<td>7,900</td>
<td>8,200</td>
<td>300</td>
<td>3.8%</td>
</tr>
<tr>
<td>The Gallery (NOVA) - 2-Person Unit</td>
<td>8,400</td>
<td>8,500</td>
<td>100</td>
<td>1.2%</td>
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</tbody>
</table>

### Living Learning Community Fee

- 100 100 0 0.0%

### Residential Telecommunications Fee

- 394 394 0 0.0%

### Board Fees

<table>
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<tr>
<th>Plan</th>
<th>2020-21 Charge</th>
<th>2021-22 Proposed Charge</th>
<th>Increase</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Flex Plan</td>
<td>3,908</td>
<td>4,126</td>
<td>218</td>
<td>5.6%</td>
</tr>
<tr>
<td>Mega Flex Plan</td>
<td>4,192</td>
<td>4,426</td>
<td>234</td>
<td>5.6%</td>
</tr>
<tr>
<td>Premium Flex Plan</td>
<td>4,484</td>
<td>4,736</td>
<td>252</td>
<td>5.6%</td>
</tr>
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</table>

### Parking Fees

<table>
<thead>
<tr>
<th>Group</th>
<th>2020-21 Charge</th>
<th>2021-22 Proposed Charge</th>
<th>Increase</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty/Staff</td>
<td>360</td>
<td>375</td>
<td>15</td>
<td>4.2%</td>
</tr>
<tr>
<td>Commuter/Graduate Student</td>
<td>315</td>
<td>330</td>
<td>15</td>
<td>4.8%</td>
</tr>
<tr>
<td>Commuter/Graduate Premium</td>
<td>415</td>
<td>430</td>
<td>15</td>
<td>3.6%</td>
</tr>
<tr>
<td>Residential Student</td>
<td>450</td>
<td>470</td>
<td>20</td>
<td>4.4%</td>
</tr>
</tbody>
</table>

Presentation Date: March 21, 2021
## Program Fees

All charges are academic year unless otherwise noted.

<table>
<thead>
<tr>
<th>Program Fees</th>
<th>2020-21 Charge</th>
<th>2021-22 Base</th>
<th>Increase</th>
<th>$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Architecture + Design Supplemental Fee</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate &amp; Graduate Enrolled Prior To Fall 2018</td>
<td>$949.00</td>
<td>$949.00</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>474.50</td>
<td>474.50</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Part-time</td>
<td>1,500.00</td>
<td>1,500.00</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Undergraduate &amp; Graduate Entering Fall 2018 &amp; Later</td>
<td>750.00</td>
<td>750.00</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td><strong>Building Construction Supplemental Fee</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate Enrolled Prior To Fall 2018</td>
<td>775.00</td>
<td>775.00</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>387.50</td>
<td>387.50</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Undergraduate Entering Fall 2018 &amp; Later</td>
<td>1,500.00</td>
<td>1,500.00</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>750.00</td>
<td>750.00</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td><strong>Engineering Supplemental Fee</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate Enrolled Prior To Fall 2018</td>
<td>775.00</td>
<td>775.00</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>387.50</td>
<td>387.50</td>
<td>0</td>
<td>0.0%</td>
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</tr>
<tr>
<td>Graduate Enrolled Prior To Fall 2018</td>
<td>1,049.00</td>
<td>1,049.00</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>524.50</td>
<td>524.50</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Undergraduate &amp; Graduate Entering Fall 2018 &amp; Later</td>
<td>2,000.00</td>
<td>2,000.00</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>1,000.00</td>
<td>1,000.00</td>
<td>0</td>
<td>0.0%</td>
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</tr>
<tr>
<td><strong>Pamplin College of Business Supplemental Fee</strong></td>
<td></td>
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<td></td>
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<tr>
<td>Undergraduate 1000-3000 Level Courses</td>
<td>75.00</td>
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</tr>
<tr>
<td>Per Credit Hour</td>
<td>25.00</td>
<td>75.00</td>
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<td>200%</td>
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<tr>
<td>Undergraduate 4000 Level Courses</td>
<td>25.00</td>
<td>75.00</td>
<td>50</td>
<td>200%</td>
<td></td>
</tr>
<tr>
<td><strong>Agriculture &amp; Life Sciences Supplemental Fee</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate and Graduate Entering Fall 2018 and Later</td>
<td>750.00</td>
<td>750.00</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>375.00</td>
<td>375.00</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td><strong>Specialized Graduate Degree Programs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Veterinary Medicine Facility Fee</td>
<td>1,200.00</td>
<td>1,200.00</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Master of Public Health</td>
<td>525.00</td>
<td>525.00</td>
<td>0</td>
<td>0.0%</td>
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<tr>
<td>Full-time</td>
<td>262.50</td>
<td>262.50</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Part-time</td>
<td>2,516.00</td>
<td>1,653.50</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Per Credit Hour</td>
<td>105.00</td>
<td>69.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master of Business Administration (EvMBA, OMBA)</td>
<td>175.00</td>
<td>175.00</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Per Credit Hour</td>
<td>175.00</td>
<td>175.00</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Master of Science in Business Administration (MSBA)</td>
<td>175.00</td>
<td>175.00</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Concentrations in Business Analytics (BA) and Hospitality &amp; Tourism Management (HTM)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Executive Model Graduate Degree Programs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Master of Business Administration (P MBA)</td>
<td>7,183.00</td>
<td>6,738.00</td>
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<td></td>
</tr>
<tr>
<td>Fall 2020 Cohort</td>
<td>300.00</td>
<td>280.75</td>
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<tr>
<td>Resident</td>
<td>2,516.00</td>
<td>1,653.50</td>
<td>(a)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per Credit Hour</td>
<td>105.00</td>
<td>69.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonresident</td>
<td>1,200.00</td>
<td>1,200.00</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Executive Master of Natural Resources (XMNR)</td>
<td>500.00</td>
<td>5,107.25</td>
<td>(a)</td>
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<tr>
<td>Spring 2021 Cohort</td>
<td>3,795.50</td>
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<td>(a)</td>
<td></td>
<td></td>
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<tr>
<td>Executive PHD in Business Concentration in Business Research (ExPHD)</td>
<td>365.00</td>
<td>365.00</td>
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<tr>
<td>Fall 2016 Cohort</td>
<td>323.50</td>
<td>323.50</td>
<td>(a)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall 2017 Cohort</td>
<td>323.50</td>
<td>323.50</td>
<td>(a)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall 2018 Cohort</td>
<td>567.75</td>
<td>520.50</td>
<td>(a)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall 2019 Cohort</td>
<td>573.50</td>
<td>509.25</td>
<td>(a)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spring 2021 Cohort</td>
<td>520.50</td>
<td>(a)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Executive Master of Business Administration (EMBA)</td>
<td>95,000</td>
<td>95,000</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
</tbody>
</table>

(a) Executive Model Graduate Degree Program fees are designed to allocate a total cost over multiple years of the program, and utilize a fee to balance the difference between the quoted price and traditional tuition and fees. Changes from year to year do not necessarily reflect a change in total program cost.

(b) Proposing Spring 2022 XMNR Cohort total price lowering $5,000 to $41,500 and using Professional Graduate tuition rate instead of Executive Graduate tuition rate.

**Presentation Date:** March 21, 2021
## UNDERGRADUATE STUDENTS

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
<th>Increase</th>
<th>$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resident</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition</td>
<td>$11,420</td>
<td>$11,751</td>
<td>$331</td>
<td>2.9%</td>
<td></td>
</tr>
<tr>
<td>(less) One-Time Relief</td>
<td>-</td>
<td>(93)</td>
<td>(93)</td>
<td>(0.8%)</td>
<td></td>
</tr>
<tr>
<td>Educational and General Fee</td>
<td>175</td>
<td>180</td>
<td>5</td>
<td>2.9%</td>
<td></td>
</tr>
<tr>
<td>Subtotal Tuition and E &amp; G Fee</td>
<td>11,595</td>
<td>11,838</td>
<td>243</td>
<td>2.1%</td>
<td></td>
</tr>
<tr>
<td>Comprehensive Fee</td>
<td>2,154</td>
<td>2,244</td>
<td>90</td>
<td>4.2%</td>
<td></td>
</tr>
<tr>
<td><strong>Total All Residents</strong></td>
<td>13,749</td>
<td>14,082</td>
<td>333</td>
<td>2.4%</td>
<td></td>
</tr>
<tr>
<td>Room (Lower Quad Dorms &amp; Telecommunications Fee) (a)</td>
<td>5,648</td>
<td>5,750</td>
<td>102</td>
<td>1.8%</td>
<td></td>
</tr>
<tr>
<td>Board (Major Flex Plan) (a)</td>
<td>3,908</td>
<td>4,126</td>
<td>218</td>
<td>5.6%</td>
<td></td>
</tr>
<tr>
<td>Subtotal Room and Board</td>
<td>9,556</td>
<td>9,876</td>
<td>320</td>
<td>3.3%</td>
<td></td>
</tr>
<tr>
<td><strong>Total Cost for Residents Living on Campus</strong></td>
<td>23,305</td>
<td>23,958</td>
<td>653</td>
<td>2.8%</td>
<td></td>
</tr>
</tbody>
</table>

|                                |                |                  |          |    |    |
| **Nonresident**                |                |                  |          |    |    |
| Tuition                        | 29,960         | 30,829           | 869      | 2.9%|    |
| (less) One-Time Relief         | -              | (245)            | (245)    | (0.8%)|    |
| Educational and General Fee    | 779            | 784              | 5        | 0.6%|    |
| Subtotal Tuition and E & G Fee | 30,739         | 31,368           | 629      | 2.0%|    |
| Comprehensive Fee              | 2,154          | 2,244            | 90       | 4.2%|    |
| **Total All Nonresidents**     | 32,893         | 33,612           | 719      | 2.2%|    |
| Room (Lower Quad Dorms & Telecommunications Fee) (a) | 5,648 | 5,750 | 102 | 1.8%|    |
| Board (Major Flex Plan) (a)    | 3,908          | 4,126            | 218      | 5.6%|    |
| Subtotal Room and Board        | 9,556          | 9,876            | 320      | 3.3%|    |
| **Total Cost for Nonresidents Living on Campus** | 42,449 | 43,488 | 1,039 | 2.4%|    |

(a) The majority of freshmen are housed in Lower Quad dorms and choose the Major Flex Plan.

Presentation Date: March 21, 2021
<table>
<thead>
<tr>
<th></th>
<th>Proposed Charge</th>
<th>Proposed Base</th>
<th>Increase $</th>
<th>Increase %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2020-21</td>
<td>2021-22</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GRADUATE STUDENTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>On-Campus Programs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Resident</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition</td>
<td>$13,701</td>
<td>$14,098</td>
<td>$397</td>
<td>2.9%</td>
</tr>
<tr>
<td>(less) One-Time Relief</td>
<td>-</td>
<td>(112)</td>
<td>(112)</td>
<td>(0.8%)</td>
</tr>
<tr>
<td>Educational and General Fee</td>
<td>175</td>
<td>180</td>
<td>5</td>
<td>2.9%</td>
</tr>
<tr>
<td>Subtotal Tuition and E &amp; G Fee</td>
<td>13,876</td>
<td>14,166</td>
<td>290</td>
<td>2.1%</td>
</tr>
<tr>
<td>Comprehensive Fee</td>
<td>2,154</td>
<td>2,244</td>
<td>90</td>
<td>4.2%</td>
</tr>
<tr>
<td><strong>Total Cost for Residents</strong></td>
<td><strong>16,030</strong></td>
<td><strong>16,410</strong></td>
<td><strong>380</strong></td>
<td><strong>2.4%</strong></td>
</tr>
<tr>
<td><strong>Nonresident</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition</td>
<td>27,614</td>
<td>28,415</td>
<td>801</td>
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</tr>
<tr>
<td>(less) One-Time Relief</td>
<td>-</td>
<td>(226)</td>
<td>(226)</td>
<td>(0.8%)</td>
</tr>
<tr>
<td>Educational and General Fee</td>
<td>779</td>
<td>784</td>
<td>5</td>
<td>0.6%</td>
</tr>
<tr>
<td>Subtotal Tuition and E &amp; G Fee</td>
<td>28,393</td>
<td>28,973</td>
<td>580</td>
<td>2.0%</td>
</tr>
<tr>
<td>Comprehensive Fee</td>
<td>2,154</td>
<td>2,244</td>
<td>90</td>
<td>4.2%</td>
</tr>
<tr>
<td><strong>Total Cost for Nonresidents</strong></td>
<td><strong>30,547</strong></td>
<td><strong>31,217</strong></td>
<td><strong>670</strong></td>
<td><strong>2.2%</strong></td>
</tr>
<tr>
<td><strong>Off-Campus Programs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Resident</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition</td>
<td>15,167</td>
<td>15,607</td>
<td>440</td>
<td>2.9%</td>
</tr>
<tr>
<td>(less) One-Time Relief</td>
<td>-</td>
<td>(124)</td>
<td>(124)</td>
<td>(0.8%)</td>
</tr>
<tr>
<td>Educational and General Fee</td>
<td>175</td>
<td>180</td>
<td>5</td>
<td>2.9%</td>
</tr>
<tr>
<td>Subtotal Tuition and E &amp; G Fee</td>
<td>15,342</td>
<td>15,663</td>
<td>321</td>
<td>2.1%</td>
</tr>
<tr>
<td>Northern Virginia Center Student Services Fee</td>
<td>148</td>
<td>151</td>
<td>3</td>
<td>2.0%</td>
</tr>
<tr>
<td><strong>Total Cost for Residents</strong></td>
<td><strong>15,490</strong></td>
<td><strong>15,814</strong></td>
<td><strong>324</strong></td>
<td><strong>2.1%</strong></td>
</tr>
<tr>
<td><strong>Nonresident</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition</td>
<td>29,559</td>
<td>30,416</td>
<td>857</td>
<td>2.9%</td>
</tr>
<tr>
<td>(less) One-Time Relief</td>
<td>-</td>
<td>(242)</td>
<td>(242)</td>
<td>(0.8%)</td>
</tr>
<tr>
<td>Educational and General Fee</td>
<td>779</td>
<td>784</td>
<td>5</td>
<td>0.6%</td>
</tr>
<tr>
<td>Subtotal Tuition and E &amp; G Fee</td>
<td>30,338</td>
<td>30,958</td>
<td>620</td>
<td>2.0%</td>
</tr>
<tr>
<td>Northern Virginia Center Student Services Fee</td>
<td>148</td>
<td>151</td>
<td>3</td>
<td>2.0%</td>
</tr>
<tr>
<td><strong>Total Cost for Nonresidents</strong></td>
<td><strong>30,486</strong></td>
<td><strong>31,109</strong></td>
<td><strong>623</strong></td>
<td><strong>2.0%</strong></td>
</tr>
</tbody>
</table>

**Presentation Date: March 21, 2021**
## VIRGINIA TECH
### TOTAL COST TO STUDENTS
#### Comparison of 2020-21 and 2021-22 Annual Charges

<table>
<thead>
<tr>
<th></th>
<th>Proposed 2020-21</th>
<th>Proposed 2021-22</th>
<th>Increase $</th>
<th>Increase %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VETERINARY MEDICINE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Virginia/Maryland Students</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition</td>
<td>21,906</td>
<td>22,462</td>
<td>556</td>
<td>2.5%</td>
</tr>
<tr>
<td>(less) One-Time Relief</td>
<td>-</td>
<td>(157)</td>
<td>(157)</td>
<td>(0.7%)</td>
</tr>
<tr>
<td>Educational and General Fee</td>
<td>175</td>
<td>180</td>
<td>5</td>
<td>2.9%</td>
</tr>
<tr>
<td>Comprehensive Fee</td>
<td>2,154</td>
<td>2,244</td>
<td>90</td>
<td>4.2%</td>
</tr>
<tr>
<td>Vet Med Facility Fee</td>
<td>1,200</td>
<td>1,200</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>Total Cost for Virginia/Maryland Students</strong></td>
<td><strong>25,435</strong></td>
<td><strong>25,929</strong></td>
<td><strong>494</strong></td>
<td><strong>1.9%</strong></td>
</tr>
<tr>
<td>Nonresident Students</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition</td>
<td>50,435</td>
<td>51,459</td>
<td>1,024</td>
<td>2.0%</td>
</tr>
<tr>
<td>(less) One-Time Relief</td>
<td>-</td>
<td>(289)</td>
<td>(289)</td>
<td>(0.6%)</td>
</tr>
<tr>
<td>Educational and General Fee</td>
<td>779</td>
<td>784</td>
<td>5</td>
<td>0.6%</td>
</tr>
<tr>
<td>Comprehensive Fee</td>
<td>2,154</td>
<td>2,244</td>
<td>90</td>
<td>4.2%</td>
</tr>
<tr>
<td>Vet Med Facility Fee</td>
<td>1,200</td>
<td>1,200</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>Total Cost for Nonresident Students</strong></td>
<td><strong>54,568</strong></td>
<td><strong>55,398</strong></td>
<td><strong>830</strong></td>
<td><strong>1.5%</strong></td>
</tr>
</tbody>
</table>

**VIRGINIA TECH CARILION SCHOOL OF MEDICINE**

<table>
<thead>
<tr>
<th></th>
<th>Proposed 2020-21</th>
<th>Proposed 2021-22</th>
<th>Increase $</th>
<th>Increase %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition</td>
<td>53,113</td>
<td>54,653</td>
<td>1,540</td>
<td>2.9%</td>
</tr>
<tr>
<td>(less) One-Time Relief</td>
<td>-</td>
<td>(434)</td>
<td>(434)</td>
<td>(0.8%)</td>
</tr>
<tr>
<td>Educational and General Fee</td>
<td>175</td>
<td>180</td>
<td>5</td>
<td>2.9%</td>
</tr>
<tr>
<td>VTCSOM Student Services Fees (a)</td>
<td>1,132</td>
<td>1,192</td>
<td>60</td>
<td>5.3%</td>
</tr>
<tr>
<td><strong>Total Cost for VTCSOM Students</strong></td>
<td><strong>54,420</strong></td>
<td><strong>55,591</strong></td>
<td><strong>1,171</strong></td>
<td><strong>2.2%</strong></td>
</tr>
</tbody>
</table>

(a) VTCSOM Student Services, Health Services, Student Government/Activities, and Recreational Sports fees (M1, M2, & M3 only).

Presentation Date: March 21, 2021
Resolution for Approval of Tuition and Fee Rates for 2021-22

DWAYNE PINKNEY, SENIOR VICE PRESIDENT AND CHIEF BUSINESS OFFICER

MARCH 21, 2021
Tuition & Fee Development Considerations
Current Environment

Traditionally, the university would develop tuition and fee rates informed by several factors:

- Level of state support
- Known costs
- Strategic initiatives
- Market competitiveness

However, COVID-19 changes the approach to be even more sensitive to potential financial challenges that the pandemic may have created for students and families.

While Virginia Tech always sought to advance access and affordability, this is increasingly important in response to the pandemic.
Advancing Affordability and Access

- $2.1 million increase planned for 2021-22
- Funds for the Future
  - Offsets tuition and fee increases for returning undergraduates with family income of up to $100,000
- Financial aid model seeks to reduce unmet need of incoming students and provide multi-year awards
- Specific aid programs provide targeted support to strategic populations
  - Presidential Scholarship Initiative, Beyond Boundaries, Provost Excellence Scholarship, InclusiveVT Matching program
Efforts to Mitigate Risks of Tuition Dependency

As a higher education institution, the university is inherently dependent upon tuition revenue. However, several strategies have been implemented to mitigate risks to this primary resource:

- Strategic enrollment plans for high-demand areas
- Enhanced enrollment management flexibility provided by state
- Program and quality investments in high-demand degree programs
- Structurally balanced budget
- Diversification of revenue sources
  - Philanthropy
  - Professional graduate programs that address market demand
Tuition & Fee Rate Proposals
Virginia Undergraduate Tuition & E&G Fee Increases

In the last 5 years:
CPI has increased 10.9%
Tuition increased 9%
## Resident Undergraduate

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
<th>Increase $</th>
<th>Increase %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition</td>
<td>$11,420</td>
<td>$11,751</td>
<td>$331</td>
<td>2.9%</td>
</tr>
<tr>
<td>(less) One-time Relief</td>
<td>-</td>
<td>(93)</td>
<td>(93)</td>
<td>(0.8%)</td>
</tr>
<tr>
<td><strong>Net Tuition</strong></td>
<td>11,420</td>
<td>11,658</td>
<td>238</td>
<td>2.1%</td>
</tr>
<tr>
<td>E&amp;G Fees</td>
<td>175</td>
<td>180</td>
<td>5</td>
<td>2.9%</td>
</tr>
<tr>
<td><strong>Tuition &amp; E&amp;G Fees</strong></td>
<td>11,595</td>
<td>11,838</td>
<td>243</td>
<td>2.1%</td>
</tr>
<tr>
<td>Comprehensive Fee</td>
<td>2,154</td>
<td>2,244</td>
<td>90</td>
<td>4.2%</td>
</tr>
<tr>
<td><strong>Tuition &amp; Mandatory Fees</strong></td>
<td>13,749</td>
<td>14,082</td>
<td>333</td>
<td>2.4%</td>
</tr>
<tr>
<td>Room and Board</td>
<td>9,556</td>
<td>9,876</td>
<td>320</td>
<td>3.3%</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td>$23,305</td>
<td>$23,958</td>
<td>$653</td>
<td>2.8%</td>
</tr>
</tbody>
</table>
## Nonresident Undergraduate

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge</th>
<th>2021-22 Charge</th>
<th>Increase $</th>
<th>Increase %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition</td>
<td>$29,960</td>
<td>$30,829</td>
<td>$869</td>
<td>2.9%</td>
</tr>
<tr>
<td>(less) One-time Relief</td>
<td></td>
<td>(245)</td>
<td>(245)</td>
<td>(0.8%)</td>
</tr>
<tr>
<td>Net Tuition</td>
<td>29,960</td>
<td>30,584</td>
<td>624</td>
<td>2.1%</td>
</tr>
<tr>
<td>E&amp;G Fees</td>
<td>779</td>
<td>784</td>
<td>5</td>
<td>0.6%</td>
</tr>
<tr>
<td><strong>Tuition &amp; E&amp;G Fees</strong></td>
<td>30,739</td>
<td>31,368</td>
<td>629</td>
<td>2.0%</td>
</tr>
<tr>
<td>Comprehensive Fee</td>
<td>2,154</td>
<td>2,244</td>
<td>90</td>
<td>4.2%</td>
</tr>
<tr>
<td><strong>Tuition &amp; Mandatory Fees</strong></td>
<td>32,893</td>
<td>33,612</td>
<td>719</td>
<td>2.2%</td>
</tr>
<tr>
<td>Room and Board</td>
<td>9,556</td>
<td>9,876</td>
<td>320</td>
<td>3.3%</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td>$42,449</td>
<td>$43,488</td>
<td>$1,039</td>
<td>2.4%</td>
</tr>
</tbody>
</table>
## Graduate

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>Proposed</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resident</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition</td>
<td>$13,701</td>
<td>$14,098</td>
<td>$397</td>
</tr>
<tr>
<td>(less) One-time Relief</td>
<td>-</td>
<td>(112)</td>
<td>(112)</td>
</tr>
<tr>
<td><strong>Net Tuition</strong></td>
<td>13,701</td>
<td>13,986</td>
<td>285</td>
</tr>
<tr>
<td>E&amp;G Fees</td>
<td>175</td>
<td>180</td>
<td>5</td>
</tr>
<tr>
<td><strong>Tuition &amp; E&amp;G Fees</strong></td>
<td>13,876</td>
<td>14,166</td>
<td>290</td>
</tr>
<tr>
<td>Comprehensive Fee</td>
<td>2,154</td>
<td>2,244</td>
<td>90</td>
</tr>
<tr>
<td><strong>Total Resident Graduate</strong></td>
<td>$16,030</td>
<td>$16,410</td>
<td>$380</td>
</tr>
</tbody>
</table>

| **Nonresident**      |          |           |          |
| Tuition              | $27,614  | $28,415   | $801     | 2.9%     |
| (less) One-time Relief| -        | (226)     | (226)    | (0.8%)   |
| **Net Tuition**      | 27,614   | 28,189    | 575      | 2.1%     |
| E&G Fees             | 779      | 784       | 5        | 0.6%     |
| **Tuition & E&G Fees**| 28,393   | 28,973    | 580      | 2.0%     |
| Comprehensive Fee    | 2,154    | 2,244     | 90       | 4.2%     |
| **Total Nonresident Graduate** | $30,547 | $31,217 | $670 | 2.2% |
## Veterinary Medicine

<table>
<thead>
<tr>
<th></th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
<th>Increase</th>
<th>$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Virginia/Maryland Students</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition</td>
<td>$ 21,906</td>
<td>$22,462</td>
<td>$556</td>
<td>2.5%</td>
<td></td>
</tr>
<tr>
<td>(less) One-time Relief</td>
<td>-</td>
<td>(157)</td>
<td>(157)</td>
<td>(0.7%)</td>
<td></td>
</tr>
<tr>
<td><strong>Net Tuition</strong></td>
<td>21,906</td>
<td>22,305</td>
<td>399</td>
<td>1.8%</td>
<td></td>
</tr>
<tr>
<td>Educational and General Fee</td>
<td>175</td>
<td>180</td>
<td>5</td>
<td>2.9%</td>
<td></td>
</tr>
<tr>
<td>Comprehensive Fee</td>
<td>2,154</td>
<td>2,224</td>
<td>90</td>
<td>4.2%</td>
<td></td>
</tr>
<tr>
<td>Vet Med Facility Fee</td>
<td>1,200</td>
<td>1,200</td>
<td>0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td><strong>Total Cost for Virginia/Maryland Students</strong></td>
<td>$25,435</td>
<td>$25,929</td>
<td>$494</td>
<td>1.9%</td>
<td></td>
</tr>
</tbody>
</table>

<p>| <strong>Out-of-State Students</strong> |                |                  |          |   |     |
| Tuition              | $ 50,435       | $51,459          | $1,024   | 2.0% |     |
| (less) One-time Relief| -              | (289)            | (289)    | (0.6%) |     |
| <strong>Net Tuition</strong>      | 50,435         | 51,170           | 735      | 1.5% |     |
| Educational and General Fee | 779              | 784              | 5        | 0.6% |     |
| Comprehensive Fee    | 2,154          | 2,244            | 90       | 4.2% |     |
| Vet Med Facility Fee | 1,200          | 1,200            | 0        | 0.0% |     |
| <strong>Total Cost for Out-of-State Students</strong> | $54,568 | $55,398 | $830 | 1.5% |     |</p>
<table>
<thead>
<tr>
<th>Medical Education</th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
<th>Increase $</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition</td>
<td>$53,113</td>
<td>$54,653</td>
<td>$1,540</td>
<td>2.9%</td>
</tr>
<tr>
<td>(less) One-time Relief</td>
<td></td>
<td>(434)</td>
<td>(434)</td>
<td>(0.8%)</td>
</tr>
<tr>
<td><strong>Net Tuition</strong></td>
<td>53,113</td>
<td>54,219</td>
<td>1,106</td>
<td>2.1%</td>
</tr>
<tr>
<td>Educational and General Fee</td>
<td>175</td>
<td>180</td>
<td>5</td>
<td>2.9%</td>
</tr>
<tr>
<td>VTCSOM Student Services Fees (a)</td>
<td>1,132</td>
<td>1,192</td>
<td>60</td>
<td>5.3%</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td>$54,420</td>
<td>$55,591</td>
<td>$1,171</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

(a) Includes VTCSOM Student Services, Health Services, Student Government/Activities, and Recreational Sports (M1, M2, M3) fees.
## Comprehensive Fee Components for 2021-22

<table>
<thead>
<tr>
<th>Fee</th>
<th>2020-21 Charge</th>
<th>Proposed 2021-22</th>
<th>Increase</th>
<th>$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Activity Fee</td>
<td>$ 330</td>
<td>$ 330</td>
<td>$0</td>
<td>0.0%</td>
<td></td>
</tr>
<tr>
<td>Health Service Fee</td>
<td>508</td>
<td>557</td>
<td>49</td>
<td>9.6%</td>
<td></td>
</tr>
<tr>
<td>Athletic Fee</td>
<td>326</td>
<td>362</td>
<td>36</td>
<td>11.0%</td>
<td></td>
</tr>
<tr>
<td>Transportation Services Fee</td>
<td>192</td>
<td>194</td>
<td>2</td>
<td>1.0%</td>
<td></td>
</tr>
<tr>
<td>Recreational Sports Fee</td>
<td>327</td>
<td>335</td>
<td>8</td>
<td>2.4%</td>
<td></td>
</tr>
<tr>
<td>Student Services Fee</td>
<td>298</td>
<td>302</td>
<td>4</td>
<td>1.3%</td>
<td></td>
</tr>
<tr>
<td>Student Cultural Activities Fee</td>
<td>173</td>
<td>164</td>
<td>(9)</td>
<td>(5.2%)</td>
<td></td>
</tr>
<tr>
<td><strong>Total Comprehensive Fee</strong></td>
<td>$ 2,154</td>
<td>$ 2,244</td>
<td>$90</td>
<td>4.2%</td>
<td></td>
</tr>
</tbody>
</table>

Comprehensive fees at the other Virginia doctoral institutions range from $2,451 to $6,058. Athletic fees at other Virginia institutions range from $634 to $3,650.
## Average Cost of Education

<table>
<thead>
<tr>
<th></th>
<th>2020-21</th>
<th>Estimated 2021-22</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount</td>
<td>% of Average</td>
</tr>
<tr>
<td>Average Cost of Education</td>
<td>$20,289</td>
<td></td>
</tr>
<tr>
<td><strong>Undergraduates</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residents</td>
<td>11,595</td>
<td>57%</td>
</tr>
<tr>
<td>Nonresidents</td>
<td>30,135</td>
<td>149%</td>
</tr>
<tr>
<td><strong>Graduates</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residents</td>
<td>13,876</td>
<td>68%</td>
</tr>
<tr>
<td>Nonresidents</td>
<td>27,789</td>
<td>137%</td>
</tr>
<tr>
<td><strong>Residency</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residents</td>
<td></td>
<td>58%</td>
</tr>
<tr>
<td>Nonresidents</td>
<td></td>
<td>145%</td>
</tr>
</tbody>
</table>
Other Rates and Changes for 2021-22

- New Online Programs and Pricing
  - Master of Business Administration (OMBA) $1,075
  - Master of Agriculture and Applied Economics 1,000
  - Graduate Certificate in Leadership for an Aging Society 850

- Graduate Candidacy Status Discounted Tuition Rate
  - For Ph.D. students who have completed their preliminary exam and are engaged solely in research & dissertation efforts, a 10% rate discount will be provided for up to 2 years.
  - Incentives faster time-to-degree, graduate assistantships, and research.
RECOMMENDATION:

That the proposed tuition and fee rates be approved, effective Fall Semester 2021.

March 22, 2021
DISCUSSION
ADDITIONAL INFORMATION
Virginia Public Four-Year Institutions, 2020-21 Resident Undergraduate

<table>
<thead>
<tr>
<th>Institutions</th>
<th>Tuition and E&amp;G Fees $</th>
<th>Rank</th>
<th>Non-E&amp;G Mandatory $</th>
<th>Rank</th>
<th>Room &amp; Board $</th>
<th>Rank</th>
<th>Total Cost $</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>William and Mary (Freshmen)</td>
<td>$17,570</td>
<td>1</td>
<td>$6,058</td>
<td>2</td>
<td>$13,356</td>
<td>1</td>
<td>$36,984</td>
<td>1</td>
</tr>
<tr>
<td>University of Virginia (First Year)</td>
<td>14,658</td>
<td>2</td>
<td>2,638</td>
<td>13</td>
<td>12,083</td>
<td>3</td>
<td>29,379</td>
<td>2</td>
</tr>
<tr>
<td>Virginia Military Institute</td>
<td>9,562</td>
<td>5</td>
<td>9,648</td>
<td>1</td>
<td>10,060</td>
<td>13</td>
<td>29,270</td>
<td>3</td>
</tr>
<tr>
<td>Christopher Newport University</td>
<td>9,100</td>
<td>7</td>
<td>5,824</td>
<td>3</td>
<td>11,760</td>
<td>5</td>
<td>26,684</td>
<td>4</td>
</tr>
<tr>
<td>Virginia Commonwealth University</td>
<td>12,259</td>
<td>3</td>
<td>2,451</td>
<td>14</td>
<td>11,297</td>
<td>8</td>
<td>26,007</td>
<td>5</td>
</tr>
<tr>
<td>Longwood University</td>
<td>8,180</td>
<td>9</td>
<td>5,730</td>
<td>4</td>
<td>12,020</td>
<td>4</td>
<td>25,930</td>
<td>6</td>
</tr>
<tr>
<td>George Mason University</td>
<td>9,510</td>
<td>6</td>
<td>3,504</td>
<td>10</td>
<td>12,090</td>
<td>7</td>
<td>25,104</td>
<td>7</td>
</tr>
<tr>
<td>University of Mary Washington</td>
<td>8,678</td>
<td>8</td>
<td>4,896</td>
<td>7</td>
<td>10,104</td>
<td>12</td>
<td>23,678</td>
<td>8</td>
</tr>
<tr>
<td>James Madison University</td>
<td>7,350</td>
<td>11</td>
<td>5,080</td>
<td>5</td>
<td>11,348</td>
<td>7</td>
<td>23,678</td>
<td>8</td>
</tr>
<tr>
<td>Virginia Tech</td>
<td>11,595</td>
<td>4</td>
<td>2,154</td>
<td>15</td>
<td>9,556</td>
<td>15</td>
<td>23,305</td>
<td>10</td>
</tr>
<tr>
<td>Old Dominion University</td>
<td>7,047</td>
<td>12</td>
<td>4,113</td>
<td>8</td>
<td>11,064</td>
<td>10</td>
<td>22,224</td>
<td>11</td>
</tr>
<tr>
<td>University of Virginia's College at Wise</td>
<td>5,866</td>
<td>13</td>
<td>4,971</td>
<td>6</td>
<td>11,277</td>
<td>9</td>
<td>22,114</td>
<td>12</td>
</tr>
<tr>
<td>Radford University</td>
<td>7,980</td>
<td>10</td>
<td>3,436</td>
<td>11</td>
<td>9,743</td>
<td>14</td>
<td>21,159</td>
<td>13</td>
</tr>
<tr>
<td>Virginia State University</td>
<td>5,769</td>
<td>14</td>
<td>3,385</td>
<td>12</td>
<td>11,544</td>
<td>6</td>
<td>20,698</td>
<td>14</td>
</tr>
<tr>
<td>Norfolk State University</td>
<td>5,752</td>
<td>15</td>
<td>3,870</td>
<td>9</td>
<td>10,844</td>
<td>11</td>
<td>20,466</td>
<td>15</td>
</tr>
</tbody>
</table>
# Market Considerations for Tuition and fees 2020-21

<table>
<thead>
<tr>
<th>In-State Undergraduate</th>
<th>Average</th>
<th>VT Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virginia Tech</td>
<td>$13,749</td>
<td></td>
</tr>
<tr>
<td>Public SCHEV Peers</td>
<td>$12,588</td>
<td>10 out of 24</td>
</tr>
<tr>
<td>Virginia Institutions</td>
<td>$13,913</td>
<td>7 out of 15</td>
</tr>
<tr>
<td>UVA</td>
<td>$17,296</td>
<td></td>
</tr>
<tr>
<td>CWM</td>
<td>$23,628</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Out-of-State Undergraduate</th>
<th>Average</th>
<th>VT Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virginia Tech</td>
<td>$32,893</td>
<td></td>
</tr>
<tr>
<td>Public SCHEV Peers</td>
<td>$35,140</td>
<td>16 out of 24</td>
</tr>
<tr>
<td>Virginia Institutions</td>
<td>$33,073</td>
<td>6 out of 15</td>
</tr>
<tr>
<td>Regional Competitive Peers (a)</td>
<td>$33,596</td>
<td>5 out of 7</td>
</tr>
</tbody>
</table>

(a) Regional competitive peers: Penn State, Rutgers, University of Maryland, Ohio State, University of Pittsburgh, and North Carolina State

(b) Behind W&M, VMI, UVA, CNU, VCU, and Longwood
Comprehensive Fee
Proposed increase of 4.2%

- Fixed Costs & Inflation: 24%
- New Facilities, Renewal, Equipment: 14%
- Wireless Network Refreshment: 5%
- Transit Enhanced Routes & Contract: 2%
- Health & Counseling Enhancements: 23%
- Student Programming: 9%
- Personnel/Fringe: 23%
Room & Board
Proposed increase of 3.3%

- New Facilities, Renewal, Equipment: 49%
- Personnel/Fringe: 41%
- Fixed Costs: 3%
- Room & Board Inflation: 7%
Student Service Enhancements

- **Health Services:** Expanded Health Center hours to add Sunday clinic and expand M-F hours (6 FTEs), Health Center Operations Director (1 FTE), Cook Counseling Center minority groups peer programming

- **Student Engagement & Campus Life:** Event programming for student well-being

- **Cultural & Community Centers:** Cultural programs support (2 Graduate Assistants)

- **Career & Professional Development:** Asst Director or Experiential Learning (1 FTE)

- **Transit:** Enhanced service and route improvements

- **Dining Services:** Increase hourly wage rate minimum, food cost inflation, GrubHub registers, West End Market Bistro serving line enhancements and Grab & Go, Deet’s Place venue update, capital project planning

- **Residence Halls:** Residence hall furniture replacement, Living Learning Community program growth, AED purchase and installation, capital project planning
**Tuition vs. Inflation**

The chart below compares the actual T&F (blue) to what T&F would have been had it followed the CPI (red) and HEPI (green) inflation trend. Actual T&F is lower at the end of the 5-year period than either inflation measure.

![Virginia Undergraduate Tuition & Fee Growth vs. Inflation 5-Year Trend](chart1.png)

The chart below compares the actual annual T&F (blue) with the inflation-adjusted annual T&F over the same 5-year period. In both CPI (red) and HEPI-adjusted (green) amounts, the buying power of T&F is lower than in 2016-17.

![Annual Virginia Undergraduate Tuition and Fees In 2016-17 Dollars](chart2.png)
## Funds for the Future

### Distribution of the Funds for the Future (FFF) Recipients by Income: 2019-20

<table>
<thead>
<tr>
<th>Family Income</th>
<th>VA Residents</th>
<th></th>
<th>Non-Residents</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Recipients</td>
<td>$s</td>
<td>Recipients</td>
<td>$s</td>
<td>Recipients</td>
<td>$s</td>
</tr>
<tr>
<td>$0-$79,999</td>
<td>2,446</td>
<td>1,391,375</td>
<td>410</td>
<td>650,716</td>
<td>2,856</td>
<td>2,042,091</td>
</tr>
<tr>
<td>$80,000-$89,999</td>
<td>264</td>
<td>150,379</td>
<td>54</td>
<td>84,815</td>
<td>318</td>
<td>235,194</td>
</tr>
<tr>
<td>$90,000-$100,000</td>
<td>263</td>
<td>149,673</td>
<td>33</td>
<td>44,235</td>
<td>296</td>
<td>193,908</td>
</tr>
<tr>
<td>Grand Total</td>
<td>2,973</td>
<td>1,691,427</td>
<td>497</td>
<td>779,766</td>
<td>3,470</td>
<td>2,471,193</td>
</tr>
</tbody>
</table>

Note: Funds for the Future protects students with low-to-middle income from tuition increases. As tuition has slowed and/or been frozen in recent years, fewer students have required tuition protection.
<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deborah</td>
<td>Student</td>
<td>I guess I am just wondering when the tuition and fees increases are going to stop? You keep increasing the cost of attendance to Virginia Tech but the fact is, there is not a commensurate increase in compensation across the country. This includes in my graduate student stipend. You have talked constantly about increasing diversity and being inclusive at Virginia Tech but simultaneously make it impossible for people with financial barriers to attend or keep attending your institution. And people with financial barriers are more often than not the case for those diverse people you say you want on your campus. So I ask you, when will the increases stop?</td>
</tr>
<tr>
<td>Tracy Franco</td>
<td>Parent</td>
<td>We hope everything will be done not to raise tuition and/or fees. We were paying full tuition but with many cases this year not receiving the full benefit of full time instruction. Almost all of our son’s classes for the past 2 semesters were asynchronous online. In several instances the professors taped only one lecture for a week and students were to watch on their own, obviously not being able to ask questions. Living on campus this year, our son has not used the classrooms nor many of the services for which we have paid full price. We have had to pay grub hub fees for 2 semesters on top of everything else. Many of us feel that we have not received value for what we have paid particularly with regard to instruction.</td>
</tr>
<tr>
<td>Charles Parker</td>
<td>Student</td>
<td>Hello ~ I would just ask the Board to consider that for the 2020-2021 school year undergraduate students paid over two thousand dollars total (Fall &amp; Spring) for fees such as rec sports fee, student activity fee, student cultural activities and athletic fee. This was all during the pandemic when activities were limited, virtual or non-existent. In the Spring of 2020, the change was sudden and unexpected, but this current school year, adjustments should have been made for some fees. I understand that fees such as the health fee or library fee are necessary. Please consider the extent of what students paid this year for fees given the pandemic and what may or may not occur for the upcoming year. At minimum, no fee increases should be permitted. Thank you for your time.</td>
</tr>
<tr>
<td>Kase Poling</td>
<td>Student</td>
<td>I understand the fact that it takes a considerable amount of resources and capital to operate a university as large as Virginia Tech. We offer a variety of programs that are invaluable to students and the world they will go on to serve. What I do not understand is why the University believes it necessary to increase costs while the country is in a continued state of economic crisis. Students and their families are already stretched thin with costs as it is. Has the University considered pursuing business initiatives that could help to finance operations and alleviate economic pressure on students? We are a land-grant university, not Harvard. If our goal is to educate the masses, why are we only making it harder to do so?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I am writing to encourage the Board of Visitors to keep current tuition and fee rates the same for the upcoming year. Please do not increase the cost of tuition and fees. While it is important to properly fund things like facility maintenance and improvements, faculty and staff raises, and other important expenses, it is equally important to keep a Virginia Tech education affordable and not increase the financial strain on undergraduate and graduate students alike. This has been a challenging year for everyone and I encourage you to please not put any additional financial hardship on students. Sincerely, A passionate Hokie</td>
</tr>
</tbody>
</table>
Dear members of the Board of Visitors,

It is an unfortunate case to learn that our BoV is looking to increase the fees for graduate (and undergraduate) students, especially now in a time of crisis that is striking the financial stability of many students and families. And since this issue is returning for a second year, I would like to reiterate my own previous comments.

I hoped to share a small part of my experiences as I chose to come to VT to become an expert in my field, and help develop technology that could be utilized in many industrial applications (I am an electrical engineer). One of the major considerations that I factored while comparing various universities included the stipends, comprehensive fees, cost of medical insurance, and cost of living. Right now Blacksburg is having a spike in increase of cost of living which is caused by the expansion of the University population. In addition, this expansion is causing an increase in our fees. If I look back and was considering to come to VT over other institutions...I would have serious pause to recognize that the comprehensive fees have increased numerous times over the past few years while stipends have not matched this increase.

While I am very fortunate to attend this institution, and to learn from my advisers and educators around me, I am burdened financially by the overall "grad tax" that these fees represent. I try to do my best to represent my lab and VT to the greater community and my professional field, but it is difficult to feel a sense of support if that community is asking for more and more from me without providing additional support- I have had opportunities to work in multiple national laboratories and present my work at top tier conferences nationally and internationally. As of right now, the graduate comprehensive fees are about 10% of my overall income and general livelihood. So, I find myself with serious decisions each month after paying my comprehensive fee.

With all the issues that have been raised and recognized by the University in the past year, especially food security for students, as well as now the impact that the COVID-19 outbreak is adding to already stressed students, I hope the BoV looks for solutions that will add support to the graduate student population. Recognizing the issues that graduate students face and providing gestures of support will reverberate throughout the university as we make up much of the foundation of success - we support students as teaching assistance, we mentor students in research initiatives, and we conduct cutting edge research in the laboratories.

We graduate students chose to attend VT because of the community and sense of UT Prosim that reverberates across campus. We want to be successful and speak of the great experiences we have had attending games at Lane stadium, walking around the duck pond, and presenting our work at conferences; and so I hope that you hear our voices and our stories with regards that the continued financial stress of the comprehensive fees bring. While this increase in fees might be necessary, the overall lack of support experienced in the graduate community will echo into future years of research, teaching, recruitment, and retention.

I thank you all for your consideration and patience to all graduate student stories, as well as your service and dedication to ensure VT remains a premier institution.

Joseph Kozak
Student
Samantha
Student
I will first state that tuition and fees should not be raised. Virginia Tech already costs way too much. For a student like me who does not receive any financial support from Tech or anyone else, only federal loans, a decision to raise fees will only hurt me. I can barely afford the expenses I have now. I rarely have any money left over at the end of the month to be able to buy food for me to eat. I survive on 49 cent macaroni and cheese as my food because I can not afford to buy anything else after rent and utilities are paid. Raising the fees will only cause me and other students more pain. The only aid that I qualify for is federal loans from the government. Whatever it does not cover, it is left up to me to find a way. I receive no support from my family and I have to pay for everything. I have many times went hungry or without just to be able to afford a monthly payment of tuition that Tech wants me to pay. So while you voting on if you should raise the tuition, think about me and imagine if your daughter was in a situation like mine and living off macaroni because she can not afford anything else.

Noel Norris
Parent
I would ask the university to first and foremost look internally for areas where cost can be reduced before automatically implementing a increase in tuition. I read a statement from one of the local news outlets stating that professors needed a 5% salary increase. Considering the cost that the university and students have incurred as a result of COVID I think a 5% raise is ludicrous. I have spent 25 years in the healthcare sector in upper management roles. Some years the organization could only offer 1 or 2% raises and in other years when we were highly profitable the organization was able to pass along 3 to 5% increases. It appears that the university is selecting to pass a cost of living increase onto its employees and not taking into consideration the students cost of living. Housing is not cheap by any means in Blacksburg. We are stuck with 12 month leases when our students are elsewhere working or doing an internship on the summer. I would ask the university to think outside the box and ask your employees to share where they see waste and use those ideas to improve processes and reduce expenses before increasing tuition. Offer an incentive for winnings ideas; it is a win win for employee moral, the university and its students. The university should also think about creating a Finance Innovation program where business students could be involved in creating and implementing Lean Six Sigma projects that are aligned to reduce waste, keep the university fiscally stable and allowing VT to be a leader in innovation. The faculty and students are equally important to the university therefore increases in salary and fees/tuition must be equally aligned.

Anonymous
Student
As a freshman at Virginia Tech, having a sham of a freshman year and still paying full price hurt. Now you are thinking about raising the prices on something I have yet to experience. Shame on you.

Manisha Chaudhari
Parent
As an out of state parent, I do not want tuition or fees to go up. Can the endowment fund (1.2 Billion) be used to help? Thank you for your time.
<table>
<thead>
<tr>
<th>Larkin Rae</th>
<th>Student</th>
</tr>
</thead>
</table>
| Coming from a low income family to Virginia Tech, relying solely on student loans, there is a lot of financial stress in my life that makes attending higher education difficult and stressful. When I look at my current tuition and fees, I already question why I am being charged for some of the things charged. There are already hefty fees for things like the Recreational sports fee, which quite honestly I don’t have the time to engage in because of my course load. So there I find issues with justifying fees that I don’t engage in. It is especially thought provoking that 30,000+ students pay these fees for the small portion of the community that have time to engage in recreational sports or student cultural activities, etc.

It is hard for me to understand why more money should be taken from students who are already struggling.

Thank you for your time if you read this. |

<table>
<thead>
<tr>
<th>Julie Hollis</th>
<th>Parent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dear BOV of Va Tech,</td>
<td></td>
</tr>
<tr>
<td>Please take into consideration the lack of instruction and accessibility to an adequate education that the students have endured for the last two and one-half semesters when the issue of raising tuition is discussed. Professors/instructors can claim to have provided enriching and engaging instruction over the course of the last two and one-half semesters however, this has not been the case. Professors have uploaded PowerPoints for students with no additional discussion or in-depth instruction happening. Others have assigned chapters to read from the textbook and then never once provided any instruction on the material prior to a quiz or test. While your argument for having to raise tuition is due in part to having to increase employees’ benefits per the state, I have to ask has the university been fiscally responsible with the millions that it received from the CARES Act in 2020? If the university is filing for a second draw, that money can also be used for salaries/benefits instead of increasing tuition. In our current economic times, when so many parents and students have lost income due to an over-the-top reaction to a cold virus with a 99.4% survival rate, an increase in the already exorbitant cost of attending Va Tech is a hard pill to swallow. In addition, students have had to pay thousands in fees for services and activities that they have not been allowed to access. There has been no indication that Timothy Sands, or anyone in the administration, has gone to Richmond to advocate for the students. Instead, the administration has shamed, guilted, isolate, and called for students to turn on one another. The Va Tech campus and community have been nothing but subjects in research that the university received millions to conduct. Instead of considering a tuition and fees increase, consider fully opening the university back up to the students which will, in turn, raise revenue. Universities across the country have already stated that classes will be in-person in the fall, and all student activities will resume at normal levels. My rising Junior and incoming Freshman need to know if they need to commit to Va Tech for the fall, or if they need to look at other universities where they will be allowed to be college students and access all that tuition and fees cover.</td>
<td></td>
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</tbody>
</table>

Sincerely,
Julie Hollis |
<table>
<thead>
<tr>
<th>Name</th>
<th>Parent</th>
<th>Message</th>
</tr>
</thead>
</table>
| Kela Rosario  | Parent          | **I am a parent of a freshman, a part time wage employee and a spouse to a staff member at VT. I feel strongly that our students and their parents have carried the heaviest burden of change at VT during this pandemic with largely virtual and asynchronous courses, required to pay for housing that at times they have not been able to use as students have returned home due to virtual courses and isolation in the apartments and dorm rooms. They have continued to take loans to pay for fees and services as well as tuition as if it was a normal year. To ask the students and their parents to pay additional tuition at this time is insensitive and not equitable.**
|               |                 | **Other universities have asked the management staff to accept a step back in salary of a small percentage to help make the necessary budgetary adjustments for the coming year. As someone who as witnessed multiple appointed (ie not through a hiring search) high level positions continue to be created during this time - including many that, at least in my perspective, represent a redundancy in our administrative systems , it seems there are other places that the necessary funds could be identified without further burdening the students, many of whom may come from families that have been specifically impacted by COVID impacts. Thank you for your efforts in keeping a college education affordable.** |
| Nancy Rider   | Parent          | **I write to urge you not to increase tuition or fees for the coming year:**
1. Many families are still struggling financially from the pandemic and cannot afford additional expenses.
2. Instead please utilize savings from operational expenses, such as utilities, janitorial services, and maintenance, that accrued while most of the campus was shut down for a year.
3. Forty billion dollars is set aside for colleges and universities from the Covid Relief Bill, in addition to generous transfers to the commonwealth. This money should be used toward meeting next yearâ€™s plan rather than increased tuition and fees.
4. Finally, the education value for this past year has been abysmal. If anything, students should receive a partial refund for tuition.
Thank you,
Nancy Rider |
Good Afternoon Members of the Board of Visitors and university officials,

My name is Miles Taylor Guth, and I have the honor and duty of serving as the Student Government Association president for this semester. As SGA President, it is my responsibility to represent the voice of the 29,000 undergraduate students at Virginia Tech. Recently, I released an anonymous survey to the students, on behalf of SGA, that allowed them to share their thoughts and opinions on the proposed tuition and fee policy for the upcoming academic year. My speech today is entirely based on the comments received in this survey and other discussions with my colleagues in governance.

Before asking the students any questions about the proposed policy, we asked if they had read the article released in the VT news about this topic, in order to make sure the student’s comments were well-founded and based on factual knowledge of the policy. 92.5% of the respondents indicated that they had read the article in its entirety. We then asked students about their approval of the policy, and 93% chose the answer stating “I am not in support of the plan. I do not understand why Virginia Tech needs to increase the cost of tuition and I would like a smaller increase or none at all.”

Students also voiced that they feel as though they do not know where the money goes and what it is used for. Many respondents indicated that they would be much more comfortable with the proposition if they understood what the university uses their fees for and how that helps the university operate. Based upon the suggestions I have heard and discussed with other university officials during meetings, I think a beneficial action, could be an Official VT release of details for the finances of the institution. This could explain where, how much, and why the fees are needed. By releasing this information, the greater VT community will develop a better understanding of the university’s financial allocation policies, and thus a greater appreciation for the rationale behind the institution’s financial policy decisions.

Before closing my statement, I would like to share my personal thoughts on this proposition. The most challenging part of this choice is the difficult balancing act that is necessary. On one hand, the university functions much like a business. We have operating costs and we have revenue sources to cover those costs. Altering our financial policies ensures that the university can operate effectively for the students, faculty, and staff. However, there is also the importance of the student’s input and feedback. Even more challenging, though, is that no student comes from the same financial situation. No two students are going to think the same way about this policy, because every student will be impacted differently by it. Trying to make the correct choice and satisfy both sides is quite difficult, and I commend you for listening to the voice of the students.
I very much appreciate the opportunity to speak with you and represent my fellow students today. I firmly believe that, when making difficult decisions, listening is half the battle.

Thank you.
March 8th, 2021

To the Members of the Board of Visitors,

It is with distinct pleasure that I, Maruf Hoque, have the opportunity to represent the graduate and professional student body of Virginia Tech as the President of the Graduate Student Assembly. I wish I were able to bring positive news in my update today, but I would like to use the next minute to describe the status of graduate life at Virginia Tech.

First, the stipend data obtained from the Graduate School and Dean DePauw, indicates that the average graduate student at VT has a monthly salary of $2,155 (9 months). About 3 weeks ago, the GSA launched a survey to gauge the Cost of Living of a graduate student at VT. The survey currently has 970 responses. We will be collecting responses for another week and will release our results by the end of the month. Our preliminary data states that on average, graduate students are paying: $827/month for rent, $228/month for utilities (water, heat, electric, internet, & cell phone), $255/month Federal/state income taxes, $367/month for comprehensive fees, $120/month in health/dental insurance premiums, much more in monthly out of pocket medical costs, and $200 month for commuting (parking, auto insurance, gasoline, & vehicle tax). This leaves the average graduate student only $158 a month to get groceries and plan for any potential emergency that may happen. This also does not factor in 3 months of pay that many graduate students do not receive due to lack of a 12 month assistantship.

Furthermore, market reports (obtained from VP Student Affairs, Frank Shushok) indicate that rent in the New River Valley is projected to increase approx. 3.3% annually, outpacing the national average. Increasing rents in the NRV, tagged with a 3% increase in tuition, and $90 increase in comp. fees further cut into the $158 that graduate students are left with.

Advancing Beyond Boundaries presented several strategic goals deemed essential to advancing VT’s reputation and position for the next decade and beyond. Of the goals cited in the strategic vision, a number are directly dependent on the activities and work of our graduate teaching and research assistants. We must ask ourselves will the final take-home pay of $158 allow us to recruit and retain future talent to VT’s graduate programs.

As a community, we cannot be in the same place year after year. We ask that you take a serious look at graduate stipends and compensation packages to make VT more competitive and to achieve the initiatives presented by Beyond Boundaries. We ask that the Board of Visitors along with the Graduate School:

1) Create a timeline for the implementation of the 14 recommendations recommended by the Graduate Education Task Force Report,
2) Convert all 9-month assistantships to 12-month assistantships,
3) Provide multi-year stipend offers to all accepted graduate students, and most importantly,
4) Offset any increase in tuition/fees with an increased stipend for all graduate students.

Respectfully,

Maruf M. Hoque
President, Graduate Student Assembly (2020-2021)
Good morning, board members. Last year, Virginia Tech elected to freeze tuition in light of the COVID-19 pandemic. The student body is thankful for that and it tells us that you hear us, the students, when we have something to say. I hope that you will maintain the freeze and not raise our comprehensive fees in the next academic term.

I don’t tell this story often, because I’m not looking for sympathy, but I think it articulates our need to ensure that we are approaching college from the lens of access. I stayed in Blacksburg this summer and had to pay just under $5000 for my summer tuition. Living from stipend to stipend, I had to ensure I was living on a budget. So I picked up the cheapest sub-lease I could find. This meant I was sharing a 4-bedroom apartment with 6 other roommates. Two of my roommates were hard drug users and would stay up late into the night screaming at each other while experiencing bad trips while I hid behind a locked bedroom door 3 feet away. I never knew who would be coming in and out of the apartment and would often wake up to find strangers passed out on the living room floor. My diet consisted of peanut butter and jelly sandwiches and noodles for most of the Summer, as I attempted to cut costs. To top it all off, my 9-5 was spent working my internship and my nights were spent working at Wendy’s, to make a little extra cash. This is what I could afford.

Think back to your college days and how much a break on tuition would have meant to you. To not have to work those extra hours late into the night to make rent. It was an uncomfortable situation. I didn’t always feel safe, but I made it work. This articulates a simple fact. Students are the most vulnerable population to be drawing from while we continue to suffer the throws of the pandemic. I lived there for two months. I got out of it. My roommates did not. Neither did my neighbors. There is a reality that many students are living paycheck to paycheck to make their dream of receiving an education from Virginia Tech a reality.

If we are to truly embody the spirit of Ut Prosim that we all hold dear to us, then I ask you, please spare us another fee. These costs are adding up. And sometimes attracting the best and the brightest to our institution doesn’t mean having the newest and the shiniest technology. It just means ensuring that others can afford to come here.

Thank you for your time.
Good afternoon and thank you for allowing me time to speak today,

I know I only have 3 minutes so I will keep my comments brief. My name is Kase Poling and I am a masters student in the civil engineering department.

I have the pleasure of representing my fellow civil engineering graduate students in the Graduate Student Assembly, and all of my fellow masters students on the Commission on Student Affairs.

This year has been one of incredibly trying circumstances for everyone, but perhaps no one more than college students. We have had to face being isolated from our peers, the difficulties of online classes, and serious financial strain due to the pandemic. You see, the industries hardest hit by the pandemic are also the industries where many students, especially graduate students, work to help make ends meet. Additionally, many students have had internships and co-op's cancelled. While the various stimulus packages have helped our nation through these times, not all of the stimulus packages have applied to college students because of various differences in legal and taxation statuses. All of this is simply to say, many college students are hurting.

Now, I recognize that the university is also facing financial strain and that there are a lot of expenditures important to the university's operations that are in need of funding. I understand the desire to meet these needs by simply raising tuition and fees, but I implore you to reject this thinking and vote to keep tuition and fees at the current rate for another year. Please ask yourselves this question: “What is the central mission of Virginia Tech?” I have come to know Virginia Tech as a university that puts immense value on not only students’ learning, but also their quality of life and wellbeing. Many students are not able to afford basic necessities because of the skyrocketing costs of tuition, fees, educational materials, not to mention the impacts from the pandemic.

Members of the Board, please vote to keep Virginia Tech students’ education and wellbeing as the university’s top priority and keep tuition and fees at the current rate for another year.

I sincerely thank you for your time.

Kase Poling
Graduate Student
Background

Graduate students who work as graduate assistants while pursuing their master’s or doctoral degrees provide a valuable service to the university. Many teach undergraduate classes while others support faculty in scholarly and sponsored research activities. To be competitive in the recruitment and retention of high quality graduate students, it is important for the university to provide compensation packages that are comparable with those offered by peer institutions. The key components of the total compensation package are a stipend, tuition assistance, and health insurance benefit.

Graduate Stipends

One of the primary goals of Virginia Tech during the 1980’s was to build a graduate compensation program that was competitive with those offered by comparable institutions. Across the campus, graduate assistants have a variety of responsibilities. To recognize the differences in services performed by these students, the university created a stipend scale that defines ranges of stipend amounts, providing academic and support unit’s flexibility in compensating graduate assistants. The levels within the stipend table have been adjusted over the years to remain competitive.

To respond to increasing competition for quality graduate students among peer institutions, the graduate student stipend scale was revised for Fall 2003 to better position Virginia Tech departments as compared to their national peers and reflect the minimum stipend levels authorized by the National Science Foundation. The Fall 2004 stipend scale added 10 additional stipend steps, numbered 41-50, to increase the university’s competitive position in attracting outstanding Ph.D. students. In 2004-05, the graduate stipend scale was enhanced to encompass the current 50 pay ranges (Attachment). These ranges provide flexibility in situations where a defined level of resources does not exactly match one of the existing steps, and allow for an actual stipend to be established within the range of a step.

In 2011-12, an academic year fixed dollar supplement was added to the graduate stipend scale to help offset university assigned costs such as the Health Services fee. As a result, the graduate assistant stipend is currently comprised of two components: 1) a base stipend and 2) a fixed supplement. For administrative efficiency and processing, the two components are combined into the traditional stipend scale. As of January 25, 2021, the current average monthly stipend for full-time graduate assistants is $2,169 per month, which falls within step 14 of the 2020-21 stipend scale.
Tuition Assistance

In the 1990’s, the university developed a more comprehensive program of tuition remission for graduate students serving on assistantships. The tuition program is financed by four sources including: the General Fund appropriation for graduate student financial assistance, a tuition remission program in the Educational and General budget, tuition payments planned in the budgets of externally sponsored grants and contracts, and private funds. The tuition remission program for graduate students on assistantship includes the remission of tuition, mandatory E&G fees (excluding the state assigned Commonwealth Capital and Equipment Fee), and non-executive graduate program fees. Tuition remission benefits are provided on a per-semester basis for the duration of the contracted period.

In the case of an early termination of an assistantship, tuition remission benefits are prorated to align with the portion of the semester completed, as displayed on Table 1.  

<table>
<thead>
<tr>
<th>Number of Weeks Into Semester When Assistantship is Terminated</th>
<th>Student Tuition &amp; E&amp;G Fee Obligation</th>
<th>Department Tuition &amp; E&amp;G Fee Obligation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than Four</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Four through less than Eight</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>Eight through less than Twelve</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Twelve through less than Sixteen</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>Sixteen or more (full semester)</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Health Insurance

At the March 2001 meeting of the Board of Visitors, a health insurance program for graduate students on assistantship was approved as a part of the graduate student compensation package to enhance the university’s competitiveness in recruiting highly qualified graduate students. The program was designed to help full-time graduate students receiving a full or partial assistantship, including graduate research assistants, graduate teaching assistants, and graduate assistants, offset a portion of the cost of health insurance premiums. In 2009-10, university management worked with representatives of the graduate student community to review and improve the overall mix and value of benefits provided through the health insurance program; these enhancements were approved by the Board and included in the program for 2010-11. For the 2018-19 academic year, the Board of Visitors approved a health insurance subsidy rate of 88 percent for graduate assistants, matching the university’s share of other employee health insurance programs.

In order to qualify for health insurance, full-time graduate students must have a 50 percent or greater appointment. Graduate students also have the option to decline coverage if they so choose. In 2020-21, the university provided 88 percent of the $3,173 annual premium cost of the plan to 1,966 graduate students. The plan provided for a $450 in-network annual deductible, $6,250 per-person out-of-pocket maximum, $25 co-pay for in-network doctors’
visits, and an unlimited maximum benefit. Students can obtain optional dental benefits for an additional cost.

**Proposed Graduate Assistant Compensation Plan for 2021-22**

The university proposes the following actions:

- Advancing the stipend scale for 2021-22 by implementing a 5.0 percent increase effective August 10, 2021, consistent with the state’s approved employee compensation plan.
- Maintaining the current academic year Stipend Supplement of $458 to help mitigate university assigned costs.
- Continuing the university share of the graduate assistant health insurance coverage at 88 percent, based upon the university’s current estimate the cost of graduate student insurance coverage.
- Continue the graduate tuition remission program.

**RECOMMENDATION**

That the graduate assistant compensation program for 2021-22 be approved.  
March 22, 2021
## 2021-22 Full-Time Graduate Monthly Stipend Compensation

**Effective August 10, 2021**

<table>
<thead>
<tr>
<th>Step</th>
<th>Monthly Base</th>
<th>Supplement</th>
<th>AY</th>
<th>Monthly</th>
<th>9 Month</th>
<th>12 Month</th>
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<td>$1,548</td>
<td>$1,548</td>
<td>$458</td>
<td>$1,599</td>
<td>$14,391</td>
<td>$19,188</td>
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<td>458</td>
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<td>14,400</td>
<td>19,200</td>
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<td>458</td>
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<td>14,949</td>
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<td>1,720</td>
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<td>16,020</td>
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<td>4,331</td>
<td>38,979</td>
<td>51,972</td>
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<td>4,393</td>
<td>39,537</td>
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<td>4,451</td>
<td>40,059</td>
<td>53,412</td>
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</tbody>
</table>

**Attachment**
Approval of 2021-22 Compensation for Graduate Assistants

KEN MILLER, VICE PRESIDENT OF FINANCE

TIM HODGE, ASSOCIATE VICE PRESIDENT FOR BUDGET AND FINANCIAL PLANNING

MARCH 21, 2021
Background

Graduate Assistants provide valuable services to the university, including teaching and support of scholarly and research activities.

Successful recruitment of high quality graduate students requires the university to offer competitive compensation packages.

Components of Total Compensation Package

- Stipend
- Tuition assistance
- Health insurance benefit
1. Base stipend scale provides a range of stipend amounts reflective of differing levels of responsibility
   - Current stipend scale has 50 pay ranges to ensure flexibility to the university programs

2. Fixed supplement (established in 2011-12 to help offset university assigned costs such as the health fee)

As of January 2021, the current average monthly stipend for full-time graduate assistants is $2,169 per month.
Tuition Assistance includes remission of tuition, mandatory E&G fees, and non-executive graduate program fees.

Funded through 4 sources:
1. General Fund appropriation for graduate assistance
2. Tuition remission in the Educational and General budget
3. Tuition payments planned in the budgets of externally sponsored grants and contracts
4. Private funds
Health Insurance

- Health insurance for graduate students on assistantships was established in 2001
- To qualify, full-time graduate students must have a 50 percent or greater assistantship appointment
- In 2020-21, the university provided 88 percent of the $3,173 annual premium cost to 1,966 graduate students
  - The 88 percent subsidy matches the university’s share of other employee health insurance programs
- Graduate students may decline coverage
Graduate Assistant Compensation Plan for 2021-22

• 5.0 percent base stipend increase effective August 10, 2021, consistent with the state’s approved employee compensation plan.
• Maintain current academic year stipend supplement of $458 to help mitigate university assigned costs.
• Continue university share of health insurance coverage at 88 percent.
• Continue the tuition remission program.

RECOMMENDATION:
That the graduate assistant compensation program for 2021-22 be approved.

March 22, 2021
Fiscal year 2020 represented another successful year in the continued advancement of Virginia Tech’s strategic plan. Strong momentum and long-term planning allowed Virginia Tech to succeed in fiscal year 2020 despite unprecedented challenges. The university continues to maintain a strong financial position as a result of prudent fiscal management strategies. The strategic deployment of new and continuing resources and the leveraging of enrollment growth has enabled the university to successfully manage the impact of increasing expenditures.

The university published its Annual Financial Report (Attachment A) in December 2020 for the fiscal year ended June 30, 2020. The report includes the university financial statements and required disclosures. Also included in the independent auditor’s report on financial statements and the report on internal control over financial reporting and on compliance and other matters. The Commonwealth of Virginia Auditor of Public Accounts conducted the audit beginning May 14, 2020 and concluded November 12, 2020 with the following results.

**Summary of Audit Results**

- Unmodified audit opinion (*Previously called an unqualified audit opinion*)
- No material weakness in internal controls
- Written comments and management’s response with anticipated correction active completion dates:
  - Improve reporting timeliness of enrollment data to the National Student Loan Data System (April 30, 2022)
  - Strengthen review process for preparation of the Schedule of Expenditures of Federal Awards (November 19, 2020)
  - Improve the timeliness of grant closeout (June 30, 2021)
The balance sheet shows positive results for fiscal year 2020 with the key indicators as follows:

**Total assets** increased by $132.2 million or 4.8 percent. The majority of the growth occurred in non-current assets ($113.7 million) with an increase of $150.1 million for ongoing construction in support of the university’s tripartite mission, which was offset by a $19.5 million decrease in long-term investments due to the COVID-19 pandemic and its effect on the market and another $21.7 million in cash and cash equivalents reflecting the spend-down of bond proceeds for capital projects.

**Total liabilities** increased by $48.3 million or 3.6 percent. The current liabilities category increased by $27.5 million, with the bulk of the increase ($19.8 million) occurring in the line of credit used to temporarily fund capital projects. The non-current liabilities category increased by $20.8 million, with the primary contributors being the pension liability ($56.5 million), the accrued compensated absences ($7.8 million), offset by decreases in Other Post-Employment Benefits (OPEB) liability ($18.1 million), and long-term debt ($23.5) million.

**Total net position** increased by $123.7 million or 8.9 percent. This increase includes a beginning balance adjustment of $2.7 million related to the implementation of GASB Statement 84. Net position in capital assets increased by $111.5 million, reflecting the university’s continued investment in new facilities and equipment as well as a prudent management of fiscal resources.

### Assets, Liabilities and Net Position at June 30, 2020 & 2019

*(all dollars in millions)*

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<thead>
<tr>
<th></th>
<th>2020</th>
<th>2019</th>
<th>Amount</th>
<th>Percent</th>
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<td>$307.7</td>
<td>$289.4</td>
<td>$18.3</td>
<td>6.3 %</td>
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<td>Capital assets, net</td>
<td>1,936.1</td>
<td>1,786.0</td>
<td>150.1</td>
<td>8.4 %</td>
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<tr>
<td>Other assets</td>
<td>645.6</td>
<td>681.8</td>
<td>(36.2)</td>
<td>(5.3)%</td>
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<tr>
<td><strong>Total assets</strong></td>
<td>2,889.4</td>
<td>2,757.2</td>
<td>132.2</td>
<td>4.8 %</td>
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<tr>
<td>Deferred outflows of resources</td>
<td>120.0</td>
<td>71.1</td>
<td>48.9</td>
<td>68.8 %</td>
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<tr>
<td>Current liabilities</td>
<td>333.3</td>
<td>305.8</td>
<td>27.5</td>
<td>9.0 %</td>
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<tr>
<td>Non-current liabilities</td>
<td>1,057.9</td>
<td>1,037.1</td>
<td>20.8</td>
<td>2.0 %</td>
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<td><strong>Total liabilities</strong></td>
<td>1,391.2</td>
<td>1,342.9</td>
<td>48.3</td>
<td>3.6 %</td>
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<tr>
<td>Deferred inflows of resources</td>
<td>104.2</td>
<td>95.2</td>
<td>9.0</td>
<td>9.5 %</td>
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<td>Invested in capital assets, net</td>
<td>1,437.6</td>
<td>1,326.1</td>
<td>111.5</td>
<td>8.4 %</td>
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<td>Restricted</td>
<td>211.9</td>
<td>214.9</td>
<td>(3.0)</td>
<td>(1.4)%</td>
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<tr>
<td>Unrestricted</td>
<td>(135.5)</td>
<td>(150.7)</td>
<td>15.2</td>
<td>10.1 %</td>
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<td><strong>Total net position</strong></td>
<td>$1,514.0</td>
<td>$1,390.3</td>
<td>$123.7</td>
<td>8.9 %</td>
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Composition of Current & Non-Current Assets, Excluding Capital Assets
Showing the Strategy to Move Cash & Cash Equivalents to Long-Term Investments at VTF
For the years ended June 30, 2016 - 2020
(all dollars in millions)
**Exhibit 3**

**Ongoing Investments in Capital Assets**

Growth in Capital Assets from FY 2002 to FY 2020
(all dollars in millions)
Composition of Current & Non-Current Liabilities
Showing the Impact of Accounting Pronouncements GASB 68 and 75 (Pension & OPEB)
For the years ended June 30, 2016 - 2020
(all dollars in millions)
### Trends in Net Position

*For the years ended June 30, 2016 - 2020*

*(all dollars in millions)*

<table>
<thead>
<tr>
<th></th>
<th>FY 2016</th>
<th>FY 2017</th>
<th>FY 2018</th>
<th>FY 2019</th>
<th>FY 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital assets, net of related debt</td>
<td>$1,163.8</td>
<td>$1,201.3</td>
<td>$1,273.2</td>
<td>$1,326.1</td>
<td>$1,437.6</td>
</tr>
<tr>
<td>Restricted, non-expendable</td>
<td>0.4</td>
<td>11.9</td>
<td>14.4</td>
<td>14.0</td>
<td>12.6</td>
</tr>
<tr>
<td>Restricted, expendable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital projects</td>
<td>36.4</td>
<td>39.7</td>
<td>11.5</td>
<td>6.2</td>
<td>3.0</td>
</tr>
<tr>
<td>Other</td>
<td>173.1</td>
<td>173.0</td>
<td>186.5</td>
<td>194.7</td>
<td>196.4</td>
</tr>
<tr>
<td>Unrestricted</td>
<td>(35.3)</td>
<td>(23.5)</td>
<td>(226.4)</td>
<td>(150.7)</td>
<td>(135.6)</td>
</tr>
<tr>
<td><strong>Total Net Position</strong></td>
<td>$1,338.4</td>
<td>$1,402.4</td>
<td>$1,259.2</td>
<td>$1,390.3</td>
<td>$1,514.0</td>
</tr>
</tbody>
</table>

**Adjusted Unrestricted Net Position**

Excluding the Impact of GASB Pronouncements Related to Pensions and OPEB

<table>
<thead>
<tr>
<th>FY 2016</th>
<th>FY 2017</th>
<th>FY 2018</th>
<th>FY 2019</th>
<th>FY 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>$347.7</td>
<td>$353.8</td>
<td>$391.2</td>
<td>$444.0</td>
<td>$458.5</td>
</tr>
</tbody>
</table>

### Total Net Position

*For the years ended June 30, 2016 - 2020*

*(all dollars in millions)*

Exhibit 5

Exhibit 6
Unrestricted Net Position
For the Totals Reported in the Audited Financial Statements
June 30, 2015 - June 30, 2020
(all dollars in millions)

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Without GASB</th>
<th>Impact of GASB 68 (FY 2015) &amp; GASB 75 (FY 2018 &amp; FY 2019)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2015</td>
<td>$313</td>
<td>-$74</td>
</tr>
<tr>
<td>FY 2016</td>
<td>$348</td>
<td>-$35</td>
</tr>
<tr>
<td>FY 2017</td>
<td>$354</td>
<td>-$24</td>
</tr>
<tr>
<td>FY 2018</td>
<td>$391</td>
<td>-$226</td>
</tr>
<tr>
<td>FY 2019</td>
<td>$444</td>
<td>-$151</td>
</tr>
<tr>
<td>FY 2020</td>
<td>$459</td>
<td>-$150</td>
</tr>
</tbody>
</table>
Virginia Tech’s Share of the Commonwealth’s Total Obligation for GASB 68 for Defined Benefit Pension Plans & GASB 75 for OPEB
For the years ended June 30, 2015 - 2019
(all dollars in millions)

* Percentage varies for each defined benefit and postemployment benefit plan. The Pre-Medicare Retiree Healthcare program amount is an imputed total.

Measurement dates for pension amounts will always be one year in arrears from the financial statement dates. Therefore, for the university’s fiscal year 2020 financial statement, the fiscal year 2019 pension, and OPEB information was used. As shown above, there are large annual fluctuations in these obligations. However, most of the impact on pension and OPEB expenses and net position is deferred to future periods.
## Summary Schedule of Cash and Investments Totals

From the Totals Reported in the Audited Financial Statements - June 30, 2020 and 2019

(all dollars in millions)

<table>
<thead>
<tr>
<th>Financial Statement Totals</th>
<th>Totals at June 30, 2020</th>
<th>Totals at June 30, 2019</th>
<th>Change in Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current Assets</td>
<td>Non-current Assets</td>
<td>Total Cash &amp; Investments</td>
</tr>
<tr>
<td>Cash</td>
<td>$2.9</td>
<td>$8.7</td>
<td>$11.6</td>
</tr>
<tr>
<td>Cash equivalents (&lt; 90 days)</td>
<td>184.9</td>
<td>4.2</td>
<td>189.1</td>
</tr>
<tr>
<td><strong>Total cash &amp; cash equivalents</strong></td>
<td>187.8</td>
<td>12.9</td>
<td>200.7</td>
</tr>
<tr>
<td>Short-term investments (&gt;90 days &lt; 1 year)</td>
<td>-</td>
<td>$3.7</td>
<td>$3.7</td>
</tr>
<tr>
<td>Long-term investments (&gt; 1 year)</td>
<td>397.0</td>
<td>397.0</td>
<td>378.4</td>
</tr>
<tr>
<td>Invested in the VTF endowment pool</td>
<td>188.7</td>
<td>188.7</td>
<td>226.7</td>
</tr>
<tr>
<td>Invested with other investment managers</td>
<td>$585.7</td>
<td></td>
<td>$605.1</td>
</tr>
<tr>
<td><strong>Total long-term investments</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Grand totals cash &amp; investments</strong></td>
<td>$187.8</td>
<td>$602.3</td>
<td>$790.1</td>
</tr>
</tbody>
</table>
Schedule of Cash & Investments by Investment Pool - $790 Million
From the Totals Reported in the Audited Financial Statements for FY 2020
(all dollars in millions)

- **VTF Endowment**: $402 million (51%)
- **Extended Duration**: $172 million (22%)
- **Primary Liquidity**: $148 million (19%)
- **Other Investments**: $56 million (7%)
- **Cash**: $12 million (1%)
Monthly Days Cash on Hand measures the number of days a university can operate (cover its cash operating expenses) from unrestricted cash and investments that can be liquidated within one month. The university has established lines of credit with three financial institutions as authorized by the Board of Visitors on June 4, 2018 to provide up to $190 million of liquidity should rapid significant unexpected demands on cash occur. The decrease between cash on hand between fiscal years 2018 and 2019 is due to the strategic move to invest more funds in the Virginia Tech Foundation endowment pool, which is less liquid than previous investments.
## Summary of Revenues, Expenses, and Changes in Net Position

For the years ended June 30, 2020 and 2019

(all dollars in millions)

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2019</th>
<th>Amount</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating revenues</td>
<td>$ 1,188.8</td>
<td>$ 1,160.4</td>
<td>$ 28.4</td>
<td>2.4 %</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>1,549.7</td>
<td>1,467.9</td>
<td>81.8</td>
<td>5.6 %</td>
</tr>
<tr>
<td><strong>Operating loss</strong></td>
<td><strong>(360.9)</strong></td>
<td><strong>(307.5)</strong></td>
<td><strong>(53.4)</strong></td>
<td><strong>17.4 %</strong></td>
</tr>
<tr>
<td>State appropriations</td>
<td>303.8</td>
<td>266.2</td>
<td>37.6</td>
<td>14.1 %</td>
</tr>
<tr>
<td>Other non-operating revenues and expenses</td>
<td>77.0</td>
<td>93.8</td>
<td>(16.8)</td>
<td>(17.9)%</td>
</tr>
<tr>
<td><strong>Non-operating revenues and expenses</strong></td>
<td><strong>380.8</strong></td>
<td><strong>360.0</strong></td>
<td><strong>20.8</strong></td>
<td><strong>5.8 %</strong></td>
</tr>
<tr>
<td><strong>Income before other revenues and expenses</strong></td>
<td><strong>19.9</strong></td>
<td><strong>52.5</strong></td>
<td><strong>(32.6)</strong></td>
<td><strong>(62.1)%</strong></td>
</tr>
<tr>
<td>Other revenues, expenses, gains or losses</td>
<td>101.1</td>
<td>78.0</td>
<td>23.1</td>
<td>29.6 %</td>
</tr>
<tr>
<td><strong>Increase in net position</strong></td>
<td><strong>121.0</strong></td>
<td><strong>130.5</strong></td>
<td><strong>(9.5)</strong></td>
<td><strong>(7.3)%</strong></td>
</tr>
<tr>
<td>Net position - <em>beginning of year adjusted</em></td>
<td>1,393.0</td>
<td>1,259.8</td>
<td>133.2</td>
<td>10.6 %</td>
</tr>
<tr>
<td><strong>Net position - end of year</strong></td>
<td><strong>$ 1,514.0</strong></td>
<td><strong>$ 1,390.3</strong></td>
<td><strong>$ 123.7</strong></td>
<td><strong>8.9 %</strong></td>
</tr>
</tbody>
</table>

*The university's beginning net position as of July 1, 2020 has been adjusted due to GASB Statement 84, *Fiduciary Activities*. This pronouncement reclassified $2.7 million from custodial funds to unrestricted.

**Operating loss**: Under GASB reporting, public universities will always show an operating loss because state appropriations, gifts and investment income are all considered non-operating revenues.
### Increase (Decrease) in Revenue
For the years ended June 30, 2020 and 2019
(all dollars in millions)

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2019</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount</td>
<td>Percent</td>
<td></td>
</tr>
<tr>
<td><strong>Operating revenues</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student tuition and fees, net</td>
<td>$575.9</td>
<td>$534.2</td>
<td>$41.7</td>
</tr>
<tr>
<td>Grants and contracts</td>
<td>322.3</td>
<td>321.4</td>
<td>0.9</td>
</tr>
<tr>
<td>Auxiliary enterprises</td>
<td>264.1</td>
<td>274.4</td>
<td>(10.3)</td>
</tr>
<tr>
<td>Other operating revenues</td>
<td>26.5</td>
<td>30.4</td>
<td>(3.9)</td>
</tr>
<tr>
<td><strong>Total operating revenues</strong></td>
<td>1,188.8</td>
<td>1,160.4</td>
<td>28.4</td>
</tr>
<tr>
<td><strong>Non-operating revenues</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State appropriations</td>
<td>303.8</td>
<td>266.2</td>
<td>37.6</td>
</tr>
<tr>
<td>Other non-operating revenues</td>
<td>77.0</td>
<td>93.8</td>
<td>(16.8)</td>
</tr>
<tr>
<td><strong>Total non-operating revenues</strong></td>
<td>380.8</td>
<td>360.0</td>
<td>20.8</td>
</tr>
<tr>
<td><strong>Other revenues</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital grants and gifts</td>
<td>101.0</td>
<td>79.2</td>
<td>21.8</td>
</tr>
<tr>
<td>Loss on disposal of capital assets</td>
<td>0.1</td>
<td>(1.2)</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>Total other revenues, gains</strong></td>
<td>101.1</td>
<td>78.0</td>
<td>23.1</td>
</tr>
<tr>
<td><strong>Total revenue</strong></td>
<td>$1,670.7</td>
<td>$1,598.4</td>
<td>$72.3</td>
</tr>
</tbody>
</table>

Operating revenue increased by $28.4 million. This growth came primarily from student tuition and fees ($41.7 million or 7.8 percent) due to the larger than anticipated freshmen class. There was a decrease in auxiliary enterprise revenue of $10.3 million due to the campus shutting down and classes going online in March due to the COVID-19 pandemic. Other operating revenue fell by $3.9 million due to a one-time insurance recovery included in the prior year.

Non-operating revenue increased by $20.8 million primarily from growth in state appropriations ($37.6 million), Coronavirus Aid, Relief, & Economic Security (CARES) Act for Higher Education Emergency Relief Fund stabilization revenue ($19.7 million) and gift funding transferred from the Virginia Tech Foundation ($4.8 million). Investment income decreased $40.0 million due to changing market conditions caused by the COVID-19 pandemic.

Total other revenue and gains grew by $23.1 million with capital grants and gifts increasing by $21.8 million.
Total Revenue by Source - $1,671 Million
For the year ended June 30, 2020
(all dollars in millions)

- Student tuition and fees: $576 million (35%)
- Grants and contracts: $322 million (19%)
- Auxiliary enterprises: $264 million (16%)
- State appropriations: $304 million (18%)
- Capital revenues: $101 million (6%)
- * Other revenues: $104 million (6%)

Other revenues include gifts, investment income, interest expense on debt related to capital assets, federal Pell grants, CARES Act stabilization revenue, and other non-operating revenue.
Changes in Operating Expenses by Function
For the years ended June 30, 2020 and 2019
(all dollars in millions)

<table>
<thead>
<tr>
<th>Function</th>
<th>2020</th>
<th>2019</th>
<th>Change</th>
<th>Amount</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instruction</td>
<td>$ 426.0</td>
<td>$ 398.9</td>
<td></td>
<td>$ 27.1</td>
<td>6.8 %</td>
</tr>
<tr>
<td>Research</td>
<td>343.2</td>
<td>330.9</td>
<td></td>
<td>12.3</td>
<td>3.7 %</td>
</tr>
<tr>
<td>Public service</td>
<td>98.5</td>
<td>92.8</td>
<td></td>
<td>5.7</td>
<td>6.1 %</td>
</tr>
<tr>
<td>Auxiliary enterprises</td>
<td>236.2</td>
<td>227.9</td>
<td></td>
<td>8.3</td>
<td>3.6 %</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>109.2</td>
<td>108.2</td>
<td></td>
<td>1.0</td>
<td>0.9 %</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>1,213.1</td>
<td>1,158.7</td>
<td><strong>54.4</strong></td>
<td><strong>4.7 %</strong></td>
<td></td>
</tr>
<tr>
<td>Support, maintenance, and other expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic support</td>
<td>106.4</td>
<td>98.9</td>
<td></td>
<td>7.5</td>
<td>7.6 %</td>
</tr>
<tr>
<td>Student services</td>
<td>26.0</td>
<td>24.5</td>
<td></td>
<td>1.5</td>
<td>6.1 %</td>
</tr>
<tr>
<td>Institutional support</td>
<td>81.7</td>
<td>73.4</td>
<td></td>
<td>8.3</td>
<td>11.3 %</td>
</tr>
<tr>
<td>Operations and maintenance of plant</td>
<td>91.9</td>
<td>91.8</td>
<td>0.1</td>
<td>0.1 %</td>
<td></td>
</tr>
<tr>
<td>Student financial assistance*</td>
<td>30.6</td>
<td>20.6</td>
<td></td>
<td>10.0</td>
<td>48.5 %</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>336.6</td>
<td>309.2</td>
<td><strong>27.4</strong></td>
<td><strong>8.9 %</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total operating expenses</strong></td>
<td><strong>$ 1,549.7</strong></td>
<td><strong>$ 1,467.9</strong></td>
<td><strong>$ 81.8</strong></td>
<td><strong>5.6 %</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Instruction** had the largest increase ($27.1 million), of which the majority occurred in the compensation and benefits category, reflecting the university’s commitment to maintaining a high-quality faculty and staff. This increase also reflects the additional expenses required to quickly adjust all of the instructional programs to on-line classes.

**Research** expenditures increased by $12.3 million, reflecting the rise in grants and contracts received by the university.

**Public service** expenditures saw an increase of $5.7 million.

**Support, maintenance, and other expenses** had a moderate increase in both institutional support ($8.3 million) and academic support ($7.5 million). Compensation and benefits account for the majority of the increases in both of these areas. All areas saw additional costs required to maintain a safe working environment during the pandemic and providing resources for employees to work remotely.
Summary of Expenses by Function - $1,550 Million
For the year ended June 30, 2020
(all dollars in millions)
## Changes in Expenses by Natural Classification

For the years ended June 30, 2020 and 2019  
(all dollars in millions)

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2019</th>
<th>Amount</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compensation and benefits</td>
<td>$1,003.8</td>
<td>$931.6</td>
<td>$72.2</td>
<td>7.8 %</td>
</tr>
<tr>
<td>Contractual services</td>
<td>125.5</td>
<td>118.9</td>
<td>$6.6</td>
<td>5.6 %</td>
</tr>
<tr>
<td>Supplies and materials</td>
<td>84.1</td>
<td>97.5</td>
<td>$(13.4)</td>
<td>(13.7)%</td>
</tr>
<tr>
<td>Travel</td>
<td>40.8</td>
<td>44.1</td>
<td>$(3.3)</td>
<td>(7.5) %</td>
</tr>
<tr>
<td>Other operating expenses</td>
<td>100.0</td>
<td>96.1</td>
<td>$3.9</td>
<td>4.1 %</td>
</tr>
<tr>
<td>Scholarships and fellowships *</td>
<td>52.0</td>
<td>40.7</td>
<td>$11.3</td>
<td>27.8 %</td>
</tr>
<tr>
<td>Sponsored program subcontracts</td>
<td>34.3</td>
<td>30.8</td>
<td>$3.5</td>
<td>11.4 %</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>109.2</td>
<td>108.2</td>
<td>$1.0</td>
<td>0.9 %</td>
</tr>
</tbody>
</table>

**Total operating expenses**  
$1,549.7    $1,467.9   $81.8   5.6 %

*Includes loan administrative fees and collection costs.

Compensation and benefits comprised of $1,003.8 million or 64.8 percent of the university’s total operating expenses. This category increased by $72.2 million, with compensation growing by $45.7 million and benefits increasing by $26.5 million. Generally, changes to expenses in this category come from three sources: increases or reductions in the number of personnel, annual salary increases, and the general trends in the costs of fringe benefits. The benefits section is affected by the changes in the actuarially calculated expenses for the OPEB and pension programs.

Scholarships and fellowships increased by $11.3 million largely due to funding from the CARES Act being used to provide students with emergency hardship support related to the disruption of on-campus operations.

Supplies, materials and travel decreased by $13.4 million and $3.3 million, respectively due to the pandemic with the university instituting a hiring freeze, and restricting travel and other spending.
Total Expenses by Natural Classification - $1,550 Million
For the Year Ended June 30, 2020
(all dollars in millions)

- Compensation and benefits: $1,004 (65%)
- Contractual services: $126 (8%)
- Supplies and materials: $84 (5%)
- Other: $336 (22%)

Other operating expenses: $100 (7%)
Travel: $41 (3%)
Scholarships and fellowships: $52 (3%)
Depreciation and amortization: $109 (7%)
Sponsored program subcontracts: $34 (2%)
The overall health of the university can be measured by focusing on available resources and the returns generated from those resources. This analysis answers whether the institution has sufficient resources and whether they use those resources to support the mission and strategic direction of the institution.

The Composite Financial Index (CFI) combines four core ratios by assigning various weights to generate an aggregate score for financial strength and stability. These ratios: Primary Reserve ratio, Viability ratio, Net Operating Revenues ratio, and Return on Net Position ratio provide for an understanding of the institutions available resources and results of current operations, which when applied to certain benchmark factors generates a score from one to ten indicating strength of the institution.

**Primary Reserve Ratio**

\[ \text{Primary Reserve Ratio} = \frac{\text{Expendable Net Assets}}{\text{Total Expenses}} \]

- Primary Reserve ratio provides a snapshot of the financial strength and flexibility of an institution.
- The accepted benchmark for this ratio is 0.40.

**Viability Ratio**

\[ \text{Viability Ratio} = \frac{\text{Expendable Net Assets}}{\text{Long - Term Debt}} \]

- Viability ratio measures the availability of expendable net position to cover long-term debt and indicates whether an institution can assume new debt.
- A benchmark ratio of 1.0 or greater indicates sufficient expendable resources to cover outstanding debt obligations.
The Net Operating Revenues ratio indicates whether an organization is living within its available resources. The nature of investing activities can result in significant volatility in this ratio and contributes to the need to analyze the results of this ratio over several fiscal years. The decrease in the FY20 ratio is a result of effects of the pandemic on auxiliary revenues and investment losses.

Return on Net Position ratio answers whether the university is achieving a positive economic return on its investment of resources. There is generally not a fixed benchmark and a higher return on net position indicates a stronger year of financial performance.

The four ratios above provide an understanding of the university's available resources and results of current operations, which when applied to certain benchmark factors generates the CFI.

- A benchmark score of 3.0 generally indicates that an institution is financially healthy.
- The consolidated CFI includes financial data at year-end for the Virginia Tech Foundation, a component unit in VT’s financial statement.
## Long-Term Debt Payable Activity

as of June 30, 2020  
(all dollars in millions)

<table>
<thead>
<tr>
<th></th>
<th>Beginning Balance</th>
<th>Additions</th>
<th>Retirements</th>
<th>Ending Balance</th>
<th>Current Portion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonds payable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section 9(c) general obligation revenue bonds</td>
<td>$114.9</td>
<td>$1.1</td>
<td>$10.3</td>
<td>$105.7</td>
<td>$8.4</td>
</tr>
<tr>
<td>Section 9(d) revenue bonds</td>
<td>55.5</td>
<td>-</td>
<td>3.3</td>
<td>52.2</td>
<td>2.4</td>
</tr>
<tr>
<td>Notes payable</td>
<td>231.1</td>
<td>8.8</td>
<td>20.7</td>
<td>219.1</td>
<td>16.5</td>
</tr>
<tr>
<td>Capital lease obligations</td>
<td>76.8</td>
<td>3.5</td>
<td>4.5</td>
<td>75.8</td>
<td>4.8</td>
</tr>
<tr>
<td><strong>Total long-term debt payable</strong></td>
<td><strong>$478.3</strong></td>
<td><strong>$13.4</strong></td>
<td><strong>$38.8</strong></td>
<td><strong>$452.8</strong></td>
<td><strong>$32.1</strong></td>
</tr>
</tbody>
</table>

Debt ratio for fiscal year 2020 was 3.51 percent with a long-term debt liability of $452.8 million.

The current portion is the amount that will be payable in FY 2021.

New debt totaling $7.9 million was issued for the renovation of Holden Hall.

New capital leases included the Kmart and Ardmore properties.
### GASB 87 Leases Effective FY 2022
Estimated Financial Statement Impact as of June 30, 2020
(all dollars in thousands)

<table>
<thead>
<tr>
<th></th>
<th>GASB 62 Long-Term Debt, Capital Leases</th>
<th>GASB 87 Long-Term Debt, Long-Term Leases</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Capital lease obligations</strong></td>
<td>$75,839</td>
<td>$75,839</td>
</tr>
<tr>
<td><strong>Operating lease commitments</strong></td>
<td>-</td>
<td>63,000</td>
</tr>
<tr>
<td><strong>Total long-term debt, capital leases</strong></td>
<td>$75,839</td>
<td>$138,839</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>GASB 62 Operating Lease Commitments Note Disclosure Only</th>
<th>GASB 87 Short-term Lease Commitments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating lease commitments</strong></td>
<td>$95,723</td>
<td>No Disclosure</td>
</tr>
<tr>
<td><strong>Short-term lease commitments</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Exhibit 20**
Upcoming Changes Due to Implementation of GASB 87 Leases  
Effective FY 2022

<table>
<thead>
<tr>
<th>Old Reporting Method - GASB 62</th>
<th>New Reporting Method - GASB 87</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Capital Leases</strong>: capitalize lease payments as a capital asset. Amortize interest expense and depreciate capital asset over life of the lease.</td>
<td><strong>1. Long-Term Leases</strong>: capitalize lease payments as an intangible right-to-use asset. Amortize interest expense and intangible right-to-use asset over life of the lease.</td>
</tr>
<tr>
<td>▪ Transfer of ownership,</td>
<td>▪ Maximum possible term at commencement exceeds 12 months,</td>
</tr>
<tr>
<td>▪ Bargain purchase option,</td>
<td>▪ Non-cancelable for at least one party, <strong>AND</strong></td>
</tr>
<tr>
<td>▪ Lease term &gt;= 75% asset life, <strong>OR</strong></td>
<td>▪ Present value of lease payments &gt;= $50K</td>
</tr>
<tr>
<td>▪ Present value lease payments &gt;= 90% asset value</td>
<td></td>
</tr>
<tr>
<td><strong>2. Operating Leases</strong>: recognize lease expense as payments made.</td>
<td><strong>2. Short-Term Leases</strong>: recognize lease expense as payments made.</td>
</tr>
<tr>
<td>▪ Not a capital lease</td>
<td>▪ Not a long-term lease</td>
</tr>
</tbody>
</table>
Sponsored Programs
For the years ended June 30, 2016 - 2020
(all dollars in millions)

<table>
<thead>
<tr>
<th></th>
<th>FY 2016</th>
<th>FY 2017</th>
<th>FY 2018</th>
<th>FY 2019</th>
<th>FY 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of awards received</td>
<td>2,291</td>
<td>2,423</td>
<td>2,533</td>
<td>2,364</td>
<td>2,391</td>
</tr>
<tr>
<td>Value of awards received</td>
<td>$278.1</td>
<td>$304.3</td>
<td>$336.8</td>
<td>$323.7</td>
<td>$367.7</td>
</tr>
<tr>
<td>Research expenditures reported to NSF</td>
<td>$521.8</td>
<td>$522.4</td>
<td>$531.6</td>
<td>$542.0</td>
<td>$556.3</td>
</tr>
<tr>
<td>NSF Rank</td>
<td>43</td>
<td>46</td>
<td>48</td>
<td>48</td>
<td>Unavailable</td>
</tr>
</tbody>
</table>
# Student Financial Aid

For the years ended June 30, 2016 - 2020

<table>
<thead>
<tr>
<th></th>
<th>FY 2016</th>
<th>FY 2017</th>
<th>FY 2018</th>
<th>FY 2019</th>
<th>FY 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of students receiving selected types of financial aid</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans</td>
<td>12,282</td>
<td>12,430</td>
<td>12,947</td>
<td>13,075</td>
<td>13,267</td>
</tr>
<tr>
<td>Grants, scholarships, and waivers</td>
<td>18,409</td>
<td>18,746</td>
<td>19,493</td>
<td>19,484</td>
<td>20,548</td>
</tr>
<tr>
<td>Employment opportunities</td>
<td>10,934</td>
<td>11,201</td>
<td>11,193</td>
<td>12,717</td>
<td>12,430</td>
</tr>
<tr>
<td><strong>Total amounts by major category, (all dollars in millions)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans</td>
<td>$165.9</td>
<td>$171.4</td>
<td>$181.3</td>
<td>$191.9</td>
<td>$200.2</td>
</tr>
<tr>
<td>Grants, scholarships, and waivers</td>
<td>194.8</td>
<td>203.6</td>
<td>215.6</td>
<td>227.7</td>
<td>243.5</td>
</tr>
<tr>
<td>Employment opportunities</td>
<td>85.5</td>
<td>87.2</td>
<td>89.5</td>
<td>92.3</td>
<td>94.7</td>
</tr>
<tr>
<td><strong>Total financial aid</strong></td>
<td>$446.2</td>
<td>$462.2</td>
<td>$486.4</td>
<td>$511.9</td>
<td>$538.4</td>
</tr>
</tbody>
</table>
49 percent of the undergraduate Virginia Tech Class of 2020 carried an average student loan debt of $31,121. Nationally, 62 percent of students at public and non-profit four-year institutions took on student loan debt averaging $28,950 per student in 2019. Over the last several years, the university has consistently had a lower proportion of Virginia resident student borrowers than the national average, and a comparable overall average debt level.
Conclusion:

Despite a challenging financial landscape, the university continues to make progress on several fronts including the following:

- Continued investment in facilities supporting the university’s strategic plan with the prudent use of debt financing.

- Strong student demand – the university continues to have growth in applications and the successive improvements of overall quality and diversity of each entering class.

- The university’s Board of Visitors also maintained tuition for resident and non-resident undergraduate, graduate, and professional students for the 2020-21 academic year at 2019-20 levels.

- The university continues to assess the lowest non-instructional mandatory charge of any public four-year institution in Virginia, directing 84 percent of a resident undergraduate’s mandatory charges towards the instructional mission.

- Virginia Tech’s NSF research ranking was 48th in 2019.

- Continued growth in unrestricted net position from operating and non-operating activities which partially offset the impact of GASB 68 in 2014-15 and GASB 75 in 2017-18 for pension liabilities and other postemployment benefits.

---

## Successful Audit & Strong Financial Position

<table>
<thead>
<tr>
<th>Strong revenue sources</th>
<th>Aa1 and AA Credit Rating</th>
<th>3.51% Debt Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unmodified audit opinion</td>
<td>Target AA- or Better</td>
<td>Target 5% or Below</td>
</tr>
<tr>
<td>No material weakness involving internal controls</td>
<td>Three minor written audit comments</td>
<td></td>
</tr>
</tbody>
</table>
Composition of Current & Non-Current Assets Excluding Capital Assets
Showing the Strategy to Move Cash & Cash Equivalents to Long-term Investments at VT Foundation
For the years ended June 30, 2016 - 2020
(all dollars in millions)
Composition of Current & Non-Current Liabilities
Showing the Impact of Accounting Pronouncements GASB 68 and 75 (Pension & OPEB)
Accounting & Financial Reporting for Pensions and Postemployment Benefits
For the Years ended June 30, 2016 - 2020
(all dollars in millions)

$1,500

$1,000

$500

$0

FY 2016: $404
  - $140 Accounts Payable & Accrued Liabilities
  - $118 GASB 75 Other Postemployment Benefits Liabilities
  - $141 Accrued Compensated Absences & Other Liabilities
  - $531 Long-Term Debt Payable & Commercial Paper

FY 2017 (restated): $439
  - $140 Accounts Payable & Accrued Liabilities
  - $118 GASB 75 Other Postemployment Benefits Liabilities
  - $141 Accrued Compensated Absences & Other Liabilities
  - $501 Long-Term Debt Payable & Commercial Paper

FY 2018: $227
  - $141 Accounts Payable & Accrued Liabilities
  - $125 GASB 75 Other Postemployment Benefits Liabilities
  - $123 Accrued Compensated Absences & Other Liabilities
  - $500 Long-Term Debt Payable & Commercial Paper

FY 2019: $207
  - $146 Accounts Payable & Accrued Liabilities
  - $123 GASB 75 Other Postemployment Benefits Liabilities
  - $123 Accrued Compensated Absences & Other Liabilities
  - $513 Long-Term Debt Payable & Commercial Paper

FY 2020: $188
  - $157 Accounts Payable & Accrued Liabilities
  - $183 GASB 75 Other Postemployment Benefits Liabilities
  - $123 Accrued Compensated Absences & Other Liabilities
  - $453 Long-Term Debt Payable & Commercial Paper

$598

$793
# Trends in Net Position

For the years ended June 30, 2016 - 2020  
(*all dollars in millions*)

<table>
<thead>
<tr>
<th></th>
<th>FY 2016</th>
<th>FY 2017</th>
<th>FY 2018</th>
<th>FY 2019</th>
<th>FY 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital assets, net of related debt</td>
<td>$1,163.8</td>
<td>$1,201.3</td>
<td>$1,273.2</td>
<td>$1,326.1</td>
<td>$1,437.6</td>
</tr>
<tr>
<td>Restricted, non-expendable</td>
<td>0.4</td>
<td>11.9</td>
<td>14.4</td>
<td>14.0</td>
<td>12.6</td>
</tr>
<tr>
<td>Restricted, expendable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital projects</td>
<td>36.4</td>
<td>39.7</td>
<td>11.5</td>
<td>6.2</td>
<td>3.0</td>
</tr>
<tr>
<td>Other</td>
<td>173.1</td>
<td>173.0</td>
<td>186.5</td>
<td>194.7</td>
<td>196.4</td>
</tr>
<tr>
<td>Unrestricted</td>
<td>(35.3)</td>
<td>(23.5)</td>
<td>(226.4)</td>
<td>(150.7)</td>
<td>(135.6)</td>
</tr>
<tr>
<td><strong>Total Net Position</strong></td>
<td><strong>$1,338.4</strong></td>
<td><strong>$1,402.4</strong></td>
<td><strong>$1,259.2</strong></td>
<td><strong>$1,390.3</strong></td>
<td><strong>$1,514.0</strong></td>
</tr>
</tbody>
</table>

Adjusted Unrestricted Net Position  
Excluding the Impact of GASB Pronouncements Related to Pensions and OPEB  

<table>
<thead>
<tr>
<th></th>
<th>FY 2016</th>
<th>FY 2017</th>
<th>FY 2018</th>
<th>FY 2019</th>
<th>FY 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$347.7</td>
<td>$353.8</td>
<td>$391.2</td>
<td>$444.0</td>
<td>$458.5</td>
</tr>
</tbody>
</table>
## Summary of Revenues, Expenses, and Changes in Net Position

For the years ended June 30, 2020 and 2019

*(all dollars in millions)*

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2019</th>
<th>Amount</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating revenues</td>
<td>$1,188.8</td>
<td>$1,160.4</td>
<td>$28.4</td>
<td>2.4 %</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>1,549.7</td>
<td>1,467.9</td>
<td>81.8</td>
<td>5.6 %</td>
</tr>
<tr>
<td>Operating loss</td>
<td><strong>(360.9)</strong></td>
<td><strong>(307.5)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State appropriations</td>
<td>303.8</td>
<td>266.2</td>
<td>37.6</td>
<td>14.1 %</td>
</tr>
<tr>
<td>Other non-operating revenues and expenses</td>
<td>77.0</td>
<td>93.8</td>
<td><strong>(16.8)</strong></td>
<td><strong>(17.9)%</strong></td>
</tr>
<tr>
<td>Non-operating revenues and expenses</td>
<td>380.8</td>
<td>360.0</td>
<td>20.8</td>
<td>5.8 %</td>
</tr>
<tr>
<td>Income before other revenues and expenses</td>
<td><strong>19.9</strong></td>
<td><strong>52.5</strong></td>
<td><strong>(32.6)</strong></td>
<td><strong>(62.1)%</strong></td>
</tr>
</tbody>
</table>

| Other revenues, expenses, gains or losses | 101.1 | 78.0 | 23.1 | 29.6 % |
| Increase in net position            | **121.0** | **130.5** | **(9.5)** | **(7.3)%** |
| Net position - *beginning of year adjusted | 1,393.0 | 1,259.8 | 133.2 | 10.6 % |

| Net position - end of year          | **$1,514.0** | **$1,390.3** | **$123.7** | **8.9 %** |

*The university's beginning net position as of July 1, 2020 has been adjusted due to GASB Statement 84, Fiduciary Activities.*

**Operating loss:** Under GASB reporting, public universities will always show an operating loss because state appropriations, gifts and investment income are all considered non-operating revenues.
### Increase (Decrease) in Revenue
For the years ended June 30, 2020 and 2019
(all dollars in millions)

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2019</th>
<th>Change</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount</td>
<td>Percent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating revenues</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student tuition and fees, net</td>
<td>$ 575.9</td>
<td>$ 534.2</td>
<td>$ 41.7</td>
<td>7.8%</td>
</tr>
<tr>
<td>Grants and contracts</td>
<td>322.3</td>
<td>321.4</td>
<td>0.9</td>
<td>0.3%</td>
</tr>
<tr>
<td>Auxiliary enterprises</td>
<td>264.1</td>
<td>274.4</td>
<td>(10.3)</td>
<td>(3.8)%</td>
</tr>
<tr>
<td>Other operating revenues</td>
<td>26.5</td>
<td>30.4</td>
<td>(3.9)</td>
<td>(12.8)%</td>
</tr>
<tr>
<td>Total operating revenues</td>
<td>1,188.8</td>
<td>1,160.4</td>
<td>28.4</td>
<td>2.4%</td>
</tr>
<tr>
<td>Non-operating revenues</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State appropriations</td>
<td>303.8</td>
<td>266.2</td>
<td>37.6</td>
<td>14.1%</td>
</tr>
<tr>
<td>Other non-operating revenues</td>
<td>77.0</td>
<td>93.8</td>
<td>(16.8)</td>
<td>(17.9)%</td>
</tr>
<tr>
<td>Total non-operating revenues</td>
<td>380.8</td>
<td>360.0</td>
<td>20.8</td>
<td>5.8%</td>
</tr>
<tr>
<td>Other revenues</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital grants and gifts</td>
<td>101.0</td>
<td>79.2</td>
<td>21.8</td>
<td>27.5%</td>
</tr>
<tr>
<td>Loss on disposal of capital assets</td>
<td>0.1</td>
<td>(1.2)</td>
<td>1.3</td>
<td>108.3%</td>
</tr>
<tr>
<td>Total other revenues, gains</td>
<td>101.1</td>
<td>78.0</td>
<td>23.1</td>
<td>29.6%</td>
</tr>
<tr>
<td>Total revenue</td>
<td>$1,670.7</td>
<td>$1,598.4</td>
<td>$ 72.3</td>
<td>4.5%</td>
</tr>
</tbody>
</table>
Total Revenues by Source- $1,671 Million
for the year ended June 30, 2020

- Student tuition and fees: $576 million (35%)
- Grants and contracts: $322 million (19%)
- Auxiliary enterprises: $264 million (16%)
- State appropriations: $304 million (18%)
- Capital revenues: $101 million (6%)
- * Other revenues: $104 million (6%)

* Other revenues include gifts, investment income, interest expense on debt related to capital assets, federal Pell grants, CARES Act stabilization revenue, and other non-operating revenue.
Summary of Expenses by Function - $1,550 Million
For the year ended June 30, 2020
(all dollars in millions)

Instruction $426 28%
Research $343 22%
Public service $99 6%
Depreciation $109 7%
Auxiliary enterprises $236 15%
Other $337 22%

Student financial assistance $31 2%
Academic support $106 7%
Operations and maintenance of plant $92 6%
Institutional support $82 5%
Student services $26 2%
Total Operating Expenses by Classification - $1,550 Million
for the year ended June 30, 2020
(all dollars in millions)
## GASB 87 Leases

### Financial Statement Impact

As of June 30, 2020
(all dollars in thousands)

<table>
<thead>
<tr>
<th>GASB 62 Long-Term Debt, Capital Leases</th>
<th>GASB 87 Long-Term Debt, Long-Term Leases</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Capital lease obligations</strong></td>
<td>$ 75,839</td>
</tr>
<tr>
<td>Operating lease commitments</td>
<td>-</td>
</tr>
<tr>
<td>Total long-term debt, capital leases</td>
<td>$ 75,839</td>
</tr>
</tbody>
</table>

Long-term lease liability (reclassified former capital lease obligations)

Estimated long-term lease liability (recognized former operating lease commitments) 63,000

Total long-term debt, long-term leases $ 138,839

---

<table>
<thead>
<tr>
<th>GASB 62 Operating Lease Commitments Note Disclosure Only</th>
<th>GASB 87 Short-term Lease Commitments No Disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating lease commitments</strong></td>
<td>$ 95,723</td>
</tr>
<tr>
<td></td>
<td>Short-term lease commitments</td>
</tr>
</tbody>
</table>

---
Measuring the Overall Level of Financial Health

![Graphs showing financial ratios over time]

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Reserve</td>
<td>Snapshot of the financial strength and flexibility of an institution calculated by dividing expendable net assets by total expenses. The accepted benchmark for this ratio is 0.4.</td>
</tr>
<tr>
<td>Viability</td>
<td>Availability of expendable net position to cover long-term debt and indicates whether an institution can assume new debt calculated by dividing expendable net assets by long-term debt. The accepted benchmark for this ratio is 1.0 or greater.</td>
</tr>
<tr>
<td>Net Operating Revenue</td>
<td>Indicates whether an organization is living within its available resources calculated by dividing net income less capital revenues by noncapital revenues.</td>
</tr>
<tr>
<td>Return on Net Position</td>
<td>Answers whether the university is achieving a positive economic return on its investment of resources calculated by dividing change in net assets by total net assets.</td>
</tr>
</tbody>
</table>

Consistent with the Auditor of Public Accounts report, the impacts of Pension and Other Post Employment Benefits have been excluded.


Measuring the Overall Level of Financial Health

The CFI is a weighted average of the four previous financial ratios. The accepted benchmark is 3.0 or greater.

Student Financial Aid
For the years ended June 30, 2016 - 2020
(all dollars in millions)
Conclusion

- Continued Investment in Facilities
- Strong Student Demand
- Moderate Undergraduate Tuition & Fees

Ranked 48th in 2019 NSF Research Ranking

Total Expenditures
- FY2019: $542.0 Million
- FY2020: $556.3 Million

Continued Growth in Net Position

Continued Success of Philanthropy

VT
The Auditor of Public Accounts (APA) is performing certain agreed-upon procedures to evaluate whether the Schedule of Revenues and Expenses of Intercollegiate Athletics Program of the university is in compliance with National Collegiate Athletic Association (NCAA) Constitution 3.2.4.15.1, for the year ended June 30, 2020. The APA is not performing an audit of the financial statements of the Intercollegiate Athletics Programs, so no opinion will be issued. The APA is performing procedures that address internal controls, affiliated and outside organizations, Schedule of Revenues and Expenses of Intercollegiate Athletics Programs (Schedule), and separate procedures for specific revenues and expenses. So far in the APA review, no matters have been identified by the APA requiring the amounts on the Schedule of Revenues and Expenses to be adjusted.

The purpose of the Schedule is to present a summary of revenues and expenses of the intercollegiate athletics programs of the university for the year ended June 30, 2020. Total revenues of the Intercollegiate Athletics Programs for the year ended June 30, 2020 were $99.2 million with the majority of the revenues coming from the football and basketball programs. Expenses for the year were $97.5 million, resulting in an operating surplus of $1.7 million. The following attachments provide additional information regarding athletic finances:

- **Attachment A** displays the five-year trend analysis of athletic revenues and expenses. The analysis indicates an upward slope in both revenues and expenses with a deficit in fiscal years 2016 and 2017, but a surplus in the other years.

- **Attachment B** shows the five-year trend for the net income/deficit. The fiscal year 2017 deficit occurred primarily due to the decision to use funds other than gifts to fund scholarships as explained below.

- **Attachment C** offers a breakout of fiscal year 2020 net operating income by athletic program, showing how the proceeds from football and men’s basketball support other athletic programs.

- **Attachment D** is the unaudited Schedule of Revenues and Expenses and footnotes for the year ended June 30, 2020.

- **Attachment E** is the reconciliation of cash basis accounting to the NCAA report.

As with all auxiliaries, the university requires the Athletics Department to maintain adequate fund balances or reserves necessary to protect operations from volatility of changes in athletic program revenues and to serve as a contingency fund. Any proposed use of reserve funds must be approved in advance through the budget process. In fiscal year 2017, a use of reserves was approved, in part, to cover an expected scholarship fundraising shortfall anticipated at the beginning of the fiscal year. Athletic scholarships are primarily funded by
gifts, and less than 20 percent of those gifts are from endowment income, which tend to have predictable annual distributions. Therefore, the majority of scholarships are funded by revenues generated from annual fundraising campaigns, which tend to be less predictable. In addition, such gifts tend to be received mainly in the latter part of each fiscal year (between December and March). If the fundraising campaign falls short of budgeted targets, the Athletics Department must use a combination of current year operating revenues or Athletics Department reserves to make up the shortfall.

For fiscal year 2017, the Athletics Department’s approved budget authorized the use of $4 million from other operating funds to cover scholarship expenses, since on July 1, 2016, only $1.7 million of cash from gifts was available for scholarships. The gift resources at that time were insufficient to cover the athletic scholarship expenses for the Fall 2017 semester. However, as the year progressed, the fundraising campaign for fiscal year 2017 exceeded the budgeted target and the cash balance held by the Virginia Tech Foundation, Inc. at June 30, 2017 to fund athletic scholarships was approximately $7.3 million.

See Attachment D for the Schedule of Revenues and Expenses of Intercollegiate Athletics Programs for the year ended June 30, 2020.

Additional Activities related to NCAA Reporting

Subsidy Percentage

House Bill 1897 (HB1897) passed by the 2015 General Assembly prohibits the total of school funds and student fees used to support intercollegiate athletics programs from exceeding a certain percentage of athletics revenues. This calculation is called the subsidy percentage. For the subsidy percentage calculation, revenues supporting spirit groups, indirect cost charges and debt service are removed from both the total revenue and the student fees. The bill requires any school that violates the subsidy percentage cap to submit to the General Assembly a five-year plan for coming into compliance. The subsidy percentages are larger for small institutions which do not have significant ticket sales or conference distributions. For Virginia Tech, the subsidy percentage must remain below 20 percent.

The university’s athletic fees are the lowest in the Commonwealth and have not been affected by the fixed percentage of fees ceiling required by the legislation. Virginia Tech has met the subsidy percentage requirement in FY2017-19. The APA report for FY2020 is not available at the time of this report.

Rolling Average

Per the requirements of Subsection D of § 23.1-1309 of the Code of Virginia, “any percentage increase in the subsidy at an institution that complies with Subsection C shall be matched by a like percentage increase in generated revenue, except that each institution shall utilize a rolling average of the change in generated revenue and student fees over the immediately preceding five years for the purposes of such calculation.” Fiscal year 2019 is the third reporting year following the effective date of the regulation, and as such, five years of data is not available to develop a five-year rolling average. The APA calculated a three-
The increase in the student fees revenue during this period was 7.5 percent, which was greater than the 5.2 percent increase in generated revenues. However, these increases are based on total revenue increases, not per student fees.

Due to the pandemic, the 2021 Virginia General Assembly amended this requirement to provide additional operational relief to institutions of higher education. Pursuant to § 4-2.01.b.11 of this act, for future reporting on fiscal year 2023 and beyond required reporting on intercollegiate athletic revenues and expenses, specifically related to the share of athletic revenues from school funds and student fees, as set out in § 23.1-1309, Code of Virginia, fiscal years 2020, 2021, and 2022 shall be excluded from the calculated five-year rolling average of the change in generated revenue and student fees also outlined in § 23.1-1309, Code of Virginia.

Table 1 below, displays Virginia Tech’s modest increase in student athletic fees for the past five fiscal periods. Significant increase in enrollment results in larger increases to student fee revenue allocated to Athletics without substantial increases in fees assessed to students. In 2019, the athletic fee increased by $9 when compared to fiscal year 2018, the increase represents just 2.9 percent of the 7.5 percent increase in student fee revenue. The university also experienced enrollment increased by nearly 1,000 full-time students in fiscal year 2018. When considering the per student increase in the comprehensive fee and increase in enrollment, the total increase approximates the year over year increase in student fees reported in the Schedule. Significant year over year increases in enrollment can have large fluctuations in student fee revenue allocated to athletics; however, the use of this information should consider the per student increase in fee, in additional to the total student fee allocation reported in the Schedule.

<table>
<thead>
<tr>
<th>Table 1: Intercollegiate Athletics Non-E&amp;G Mandatory Intercollegiate Athletics Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fee per FTE student</td>
</tr>
<tr>
<td>$ Increase</td>
</tr>
<tr>
<td>% Increase</td>
</tr>
<tr>
<td>Student fee revenues</td>
</tr>
</tbody>
</table>

The APA is near completion of its review and a draft report is anticipated in the near future. The final audit report will be distributed to the Board of Visitors as soon as it is available.
Intercollegiate Athletic Programs Revenue & Expenses
FY 2016 - FY 2020
(all dollars in millions)
Intercollegiate Athletic Programs
Net Operating Income (Deficit)
FY 2016 - FY 2020
(all dollars in millions)

FY 2016: $-0.8
FY 2017: $-3.3
FY 2018: $4.9
FY 2019: $2.8
FY 2020 (unaudited): $1.7
# Intercollegiate Athletic Programs

## Net Operating Income (Deficit) for the Year Ended of June 30, 2020

Unaudited  
*(all dollars in millions)*

<table>
<thead>
<tr>
<th></th>
<th>Revenue</th>
<th>Expenses</th>
<th>Net Income/Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Football</td>
<td>$49.6</td>
<td>$34.3</td>
<td>$15.3</td>
</tr>
<tr>
<td>Men's Basketball</td>
<td>11.3</td>
<td>9.6</td>
<td>1.7</td>
</tr>
<tr>
<td>Women's Basketball</td>
<td>1.1</td>
<td>4.6</td>
<td>(3.5)</td>
</tr>
<tr>
<td>*Other Sports</td>
<td>5.7</td>
<td>21.0</td>
<td>(15.3)</td>
</tr>
<tr>
<td><strong>Non Program Specific</strong></td>
<td>31.5</td>
<td>28.0</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$99.2</td>
<td>$97.5</td>
<td>$1.7</td>
</tr>
</tbody>
</table>

*Other Sports is the total of Men's Other Sports, Women's Other Sports. There are 16 other sports programs such as baseball, softball, golf, tennis, track & field, etc.

** Non Program Specific includes revenues and expenses that cannot be attributed to a specific sport and support the overall function of the Athletic program.
### Schedule of Revenues & Expenses
of Intercollegiate Athletic Programs
for the Year Ended of June 30, 2020
UNAUDITED

#### Operating Revenues:

<table>
<thead>
<tr>
<th>Source</th>
<th>Men's Football</th>
<th>Men's Basketball</th>
<th>Women's Football</th>
<th>Women's Basketball</th>
<th>Men's Other Sports</th>
<th>Women's Other Sports</th>
<th>Non-Program Specific</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ticket sales</td>
<td>$16,159,618</td>
<td>$2,851,727</td>
<td>$187,525</td>
<td>$1,169</td>
<td>$325</td>
<td>$19,200,363</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct state or other government support</td>
<td>632</td>
<td>391</td>
<td>-</td>
<td>209</td>
<td>991</td>
<td>205</td>
<td>2,429</td>
<td></td>
</tr>
<tr>
<td>Student fees</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Direct institutional support</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Less: Transfers to institution</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Indirect institutional support</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Guarantees</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>11,700</td>
</tr>
<tr>
<td>Contributions</td>
<td>4,958,551</td>
<td>278,548</td>
<td>227,860</td>
<td>448,010</td>
<td>281,567</td>
<td>15,612,295</td>
<td>21,806,832</td>
<td></td>
</tr>
<tr>
<td>In-kind</td>
<td>32,886</td>
<td>70,166</td>
<td>72</td>
<td>11,229</td>
<td>21,301</td>
<td>13,805</td>
<td>149,460</td>
<td></td>
</tr>
<tr>
<td>Compensation and benefits provided by a third-party</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Media rights</td>
<td>17,717,303</td>
<td>6,735,392</td>
<td>414,309</td>
<td>76,500</td>
<td>3,896,000</td>
<td>28,867,005</td>
<td>1,536,105</td>
<td>21,806,832</td>
</tr>
<tr>
<td>NCAA distributions</td>
<td>762,503</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>773,602</td>
<td>1,536,105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conference distributions (non-media or bowl)</td>
<td>625,149</td>
<td>292,258</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>917,407</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conference distributions (bowl)</td>
<td>5,272,407</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5,272,407</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program, novelty, parking, and concession sales</td>
<td>1,560,715</td>
<td>103,203</td>
<td>16,943</td>
<td>8,787</td>
<td>5,273</td>
<td>1,696,996</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Royalties, licensing, advertisement and sponsorships</td>
<td>1,167,606</td>
<td>71,898</td>
<td>61,288</td>
<td>292,616</td>
<td>204,209</td>
<td>2,887,302</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sports camp revenues</td>
<td>3,274</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3,274</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Athletics restricted endowment and investment income</td>
<td>967,386</td>
<td>158,936</td>
<td>192,310</td>
<td>536,285</td>
<td>1,039,133</td>
<td>3,644,822</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>76,734</td>
<td>66,734</td>
<td>964,396</td>
<td>1,107,864</td>
<td></td>
</tr>
<tr>
<td>Bowl revenue</td>
<td>1,165,924</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1,165,924</td>
<td></td>
</tr>
<tr>
<td><strong>Total Operating Revenues</strong></td>
<td><strong>$49,631,452</strong></td>
<td><strong>$11,325,022</strong></td>
<td><strong>$1,100,308</strong></td>
<td><strong>$1,413,237</strong></td>
<td><strong>$4,243,593</strong></td>
<td><strong>$31,480,342</strong></td>
<td><strong>$99,193,956</strong></td>
<td></td>
</tr>
</tbody>
</table>
## Schedule of Revenues & Expenses of Intercollegiate Athletic Programs for the Year Ended of June 30, 2020

**UNAUDITED**

<table>
<thead>
<tr>
<th>Operating Expenses:</th>
<th>Football</th>
<th>Basketball</th>
<th>Basketball</th>
<th>Other Sports</th>
<th>Other Sports</th>
<th>Specific</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athletic student aid</td>
<td>(4,565,318)</td>
<td>(839,236)</td>
<td>(792,246)</td>
<td>(3,345,854)</td>
<td>(4,932,489)</td>
<td>(1,181,500)</td>
<td>(15,656,642)</td>
</tr>
<tr>
<td>Guarantees</td>
<td>(1,295,000)</td>
<td>(746,032)</td>
<td>(76,000)</td>
<td>(13,500)</td>
<td>(3,535)</td>
<td>-</td>
<td>(2,134,066)</td>
</tr>
<tr>
<td>Coaching salaries, benefits, and bonuses</td>
<td>(8,566,202)</td>
<td>(3,736,886)</td>
<td>(1,261,471)</td>
<td>(3,128,803)</td>
<td>(2,805,781)</td>
<td>-</td>
<td>(19,499,143)</td>
</tr>
<tr>
<td>paid by the university and related entities</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Coaching other compensation and benefits paid by a third-party</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Support Staff/Administrative salaries, benefits, and bonuses paid by the university and related entities</td>
<td>(2,291,232)</td>
<td>(857,714)</td>
<td>(501,256)</td>
<td>(295,029)</td>
<td>(268,365)</td>
<td>(1,024,821)</td>
<td>(17,238,417)</td>
</tr>
<tr>
<td>Support Staff/Administrative other compensation paid by a third-party</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Severance payments</td>
<td>(223,735)</td>
<td>-</td>
<td>(26,906)</td>
<td>(8,109)</td>
<td>(38,977)</td>
<td>(89,798)</td>
<td>(387,705)</td>
</tr>
<tr>
<td>Recruiting</td>
<td>(847,964)</td>
<td>(323,806)</td>
<td>(204,565)</td>
<td>(227,729)</td>
<td>(249,105)</td>
<td>(23,716)</td>
<td>(1,876,885)</td>
</tr>
<tr>
<td>Team travel</td>
<td>(1,109,348)</td>
<td>(706,031)</td>
<td>(667,441)</td>
<td>(627,866)</td>
<td>(815,054)</td>
<td>(147)</td>
<td>(3,925,707)</td>
</tr>
<tr>
<td>Sports equipment, uniforms and supplies</td>
<td>(771,108)</td>
<td>(157,458)</td>
<td>(90,384)</td>
<td>(595,045)</td>
<td>(542,248)</td>
<td>(6,160)</td>
<td>(2,162,402)</td>
</tr>
<tr>
<td>Game expenses</td>
<td>(2,737,073)</td>
<td>(728,003)</td>
<td>(321,263)</td>
<td>(189,466)</td>
<td>(200,046)</td>
<td>(560,578)</td>
<td>(4,736,429)</td>
</tr>
<tr>
<td>Fundraising, marketing and promotions</td>
<td>(490,976)</td>
<td>(90,027)</td>
<td>(44,821)</td>
<td>(16,320)</td>
<td>(42,906)</td>
<td>(352,666)</td>
<td>(1,037,715)</td>
</tr>
<tr>
<td>Sport camp expenses</td>
<td>(16,499)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(16,499)</td>
</tr>
<tr>
<td>Spirit groups</td>
<td>(164,035)</td>
<td>(19,453)</td>
<td>(3,080)</td>
<td>(1,280)</td>
<td>(1,280)</td>
<td>(245,577)</td>
<td>(434,705)</td>
</tr>
<tr>
<td>Athletic facilities leases, and rental fees</td>
<td>(4,078,252)</td>
<td>(325,849)</td>
<td>(325,849)</td>
<td>(125,000)</td>
<td>(125,000)</td>
<td>(920,000)</td>
<td>(250,908)</td>
</tr>
<tr>
<td>Athletic facilities debt service</td>
<td>(2,193,676)</td>
<td>(495,701)</td>
<td>(49,95)</td>
<td>(337,721)</td>
<td>(266,951)</td>
<td>(3,992,277)</td>
<td>(7,336,020)</td>
</tr>
<tr>
<td>Direct overhead and administrative expenses</td>
<td>(97,922)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(5,208,562)</td>
<td>(5,306,485)</td>
</tr>
<tr>
<td>Indirect institutional support</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Medical expenses and insurance</td>
<td>(235,147)</td>
<td>(45,355)</td>
<td>(46,768)</td>
<td>(250,452)</td>
<td>(265,350)</td>
<td>(521,255)</td>
<td>(1,364,327)</td>
</tr>
<tr>
<td>Memberships and dues</td>
<td>(2,010)</td>
<td>(685)</td>
<td>(1,225)</td>
<td>(11,792)</td>
<td>(9,721)</td>
<td>(32,152)</td>
<td>(57,585)</td>
</tr>
<tr>
<td>Student-Athlete meals</td>
<td>(855,208)</td>
<td>(164,520)</td>
<td>(68,80)</td>
<td>(380,793)</td>
<td>(328,710)</td>
<td>(69,009)</td>
<td>(1,867,043)</td>
</tr>
<tr>
<td>Other operating expenses</td>
<td>(2,177,300)</td>
<td>(356,981)</td>
<td>(95,170)</td>
<td>(281,447)</td>
<td>(233,447)</td>
<td>(1,587,171)</td>
<td>(4,671,946)</td>
</tr>
<tr>
<td>Bowl expenses</td>
<td>(1,304,343)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(1,304,343)</td>
</tr>
<tr>
<td>Bowl expenses - Coaching Compensation/Bonuses</td>
<td>(302,850)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(302,850)</td>
</tr>
<tr>
<td><strong>Total Operating Expenditures</strong></td>
<td>$34,265,429</td>
<td>$9,593,738</td>
<td>$4,176,944</td>
<td>$9,836,026</td>
<td>$11,128,964</td>
<td>$28,091,124</td>
<td>$97,492,222</td>
</tr>
</tbody>
</table>

**Excess (Deficiency) of Revenues Over (Under) Expenditures for the Year**

<table>
<thead>
<tr>
<th>Expenditures for the Year</th>
<th>Football</th>
<th>Basketball</th>
<th>Basketball</th>
<th>Other Sports</th>
<th>Other Sports</th>
<th>Specific</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$83,886,881</td>
<td>$20,918,760</td>
<td>$5,677,252</td>
<td>$11,249,264</td>
<td>$15,372,557</td>
<td>$59,571,466</td>
<td>$1,701,734</td>
<td>$12,134,066</td>
</tr>
</tbody>
</table>
1. BASIS OF PRESENTATION

The accompanying Schedule of Revenues and Expenses of Intercollegiate Athletic Programs has been prepared on the accrual basis of accounting. The purpose of the Schedule is to present a summary of revenues and expenses of the intercollegiate athletic programs of the University for the year ended June 30, 2020. The Schedule includes those intercollegiate athletics revenues and expenses made on behalf of the University’s athletics programs by outside organizations not under the accounting control of the University. Because the Schedule presents only a selected portion of the activities of the University, it is not intended to and does not present either the financial position, changes in fund balances, or cash flows for the year then ended. Revenues and expenses directly identifiable with each category of sport presented are reported accordingly. Revenues and expenses not directly identifiable to a specific sport are reported under the category "Non-Program Specific."

2. AFFILIATED ORGANIZATIONS

The University received $25,451,654 from the Virginia Tech Foundation, Inc. Approximately $15,656,642 of these funds were used for grant-in-aid scholarships for student-athletes. These amounts received are included in the accompanying Schedule as follows: $12,011,820 is included in the Contributions line item and $3,644,822 is included in the Athletics Restricted Endowment and Investment Income line item.

3. LONG-TERM DEBT

In October 2001, a $26,285,000 note was issued for the Athletic Department. This note was issued for the South End Zone addition to Lane Stadium. Part of the original debt issuance was refinanced in February 2011 with an $11,540,000 note that will be repaid through 2027 and has an outstanding balance of $7,625,000. The remaining original debt issuance was repaid with private fund raising and operating revenues during 2020.

In May 2004, a $52,715,000 revenue bond was issued for the Athletic Department. This bond was issued for the West Side Expansion to Lane Stadium which was completed in 2006. The majority of this debt was refinanced in November 2012 with a $32,365,000 note. This note has an outstanding balance of $21,380,000 and will be repaid with private fund raising and operating revenues through 2029. The remaining original debt issuance was repaid with private fund raising and operating revenues during 2014.

In November 2009, an $8,705,000 note was issued for the Athletic Department. This note was issued for the Hahn Hurst Basketball Practice Center. Part of the original debt was refinanced in November 2016 with a $5,385,000 note that will be repaid through 2030 and has an outstanding balance of $5,385,000.
The remaining original debt issuance was repaid with private fund raising and operating revenues during 2020.

In October 2015, a $510,000 revenue bond was issued for the Athletic Department. This bond was issued for the Indoor Practice Facility. This note has an outstanding balance of $510,000 and will be repaid with general operating revenues through 2035.

In August 2016, a $31,509,000 internal loan was issued for the Athletic Department. This loan was issued for improvements to the Baseball Stadium and Rector Field House. This note has an outstanding balance of $29,286,000 and will be repaid with general operating revenues through 2035.

A summary of future principal and interest commitments for fiscal years subsequent to June 30, 2020 is presented as follows:

<table>
<thead>
<tr>
<th>FY Ending June 30,</th>
<th>Principal</th>
<th>Interest</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>$4,112,000</td>
<td>$1,843,000</td>
<td>$5,955,000</td>
</tr>
<tr>
<td>2022</td>
<td>4,294,000</td>
<td>1,655,000</td>
<td>5,949,000</td>
</tr>
<tr>
<td>2023</td>
<td>4,355,000</td>
<td>1,461,000</td>
<td>5,816,000</td>
</tr>
<tr>
<td>2024</td>
<td>4,542,000</td>
<td>1,272,000</td>
<td>5,814,000</td>
</tr>
<tr>
<td>2025</td>
<td>4,950,000</td>
<td>1,113,000</td>
<td>6,063,000</td>
</tr>
<tr>
<td>2026-2030</td>
<td>23,771,000</td>
<td>3,305,000</td>
<td>27,076,000</td>
</tr>
<tr>
<td>2031-2035</td>
<td>18,162,000</td>
<td>771,000</td>
<td>18,933,000</td>
</tr>
<tr>
<td></td>
<td>$64,186,000</td>
<td>$11,420,000</td>
<td>$75,606,000</td>
</tr>
</tbody>
</table>

4. UNIVERSITY ADMINISTRATION FEE

As with all auxiliary enterprises, the University charges the Athletic Department an administrative fee. During the fiscal year, the Department paid $5,306,485 to the University. This amount is included on the Indirect Cost Paid to the Institution by Athletics line item, and includes $97,922 in Football and $5,208,562 in the Non-Program Specific category.

5. CAPITAL ASSETS

Capital assets consisting of buildings, infrastructure, and equipment are stated at appraised historical cost or actual cost where determinable. Construction in progress (CIP) is capitalized at actual cost as expenses are incurred. All gifts of capital assets are recorded at fair market value as of the donation date.

Equipment is capitalized when the unit acquisition cost is $2,000 or greater and the estimated useful life is one year or more. Software is capitalized when the acquisition and/or the
development costs exceed $100,000. Renovation costs are capitalized when expenses total more than $100,000, the asset value significantly increases, or the useful life is significantly extended. Routine repairs and maintenance are charged to operating expense in the year the expense is incurred.

Depreciation is computed using the straight-line method over the useful life of the assets. The useful life is 40 to 60 years for buildings, 10 to 50 years for infrastructure and land improvements, and 3 to 30 years for fixed and movable equipment.

A summary of changes in capital assets follows for the year ending June 30, 2020 (all dollars in thousands):

<table>
<thead>
<tr>
<th></th>
<th>Beginning Balance</th>
<th>Additions</th>
<th>Retirements</th>
<th>Ending Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Depreciable capital assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buildings</td>
<td>$206,289</td>
<td>$3,303</td>
<td></td>
<td>$209,592</td>
</tr>
<tr>
<td>Moveable equipment</td>
<td>7,775</td>
<td>5,905</td>
<td>85</td>
<td>13,595</td>
</tr>
<tr>
<td>Software</td>
<td>313</td>
<td></td>
<td></td>
<td>313</td>
</tr>
<tr>
<td>Fixed equipment</td>
<td>12,963</td>
<td>138</td>
<td></td>
<td>13,101</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>20,454</td>
<td>93</td>
<td></td>
<td>20,547</td>
</tr>
<tr>
<td>Total depreciable capital assets, at cost</td>
<td>247,794</td>
<td>9,439</td>
<td>85</td>
<td>257,148</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Beginning Balance</th>
<th>Additions</th>
<th>Retirements</th>
<th>Ending Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Less accumulated depreciation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buildings</td>
<td>$58,557</td>
<td>$4,577</td>
<td></td>
<td>$63,134</td>
</tr>
<tr>
<td>Moveable equipment</td>
<td>5,654</td>
<td>1,225</td>
<td>235</td>
<td>6,644</td>
</tr>
<tr>
<td>Software</td>
<td>275</td>
<td>10</td>
<td></td>
<td>285</td>
</tr>
<tr>
<td>Fixed equipment</td>
<td>4,867</td>
<td>635</td>
<td></td>
<td>5,502</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>17,264</td>
<td>663</td>
<td></td>
<td>17,927</td>
</tr>
<tr>
<td>Total accumulated depreciation</td>
<td>86,617</td>
<td>7,110</td>
<td>235</td>
<td>93,492</td>
</tr>
<tr>
<td>Total depreciable capital assets, Net of accumulated depreciation</td>
<td>161,177</td>
<td>2,329</td>
<td>(150)</td>
<td>163,656</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Beginning Balance</th>
<th>Additions</th>
<th>Retirements</th>
<th>Ending Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-depreciable capital assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction in progress</td>
<td>5,184</td>
<td>13,375</td>
<td>3,124</td>
<td>15,435</td>
</tr>
<tr>
<td>Total non-depreciable capital assets</td>
<td>5,184</td>
<td>13,375</td>
<td>3,124</td>
<td>15,435</td>
</tr>
<tr>
<td>Total capital assets, net of accumulated depreciation</td>
<td>$166,361</td>
<td>$15,704</td>
<td>$2,974</td>
<td>$179,091</td>
</tr>
</tbody>
</table>
# Intercolligate Athletic Programs

## Reconciliation of Cash to NCAA Report

For the year ended June 30, 2020

(all dollars in millions)

<table>
<thead>
<tr>
<th>Cash Basis Per BOV Financial Performance Report</th>
<th>Revenues</th>
<th>Expenses</th>
<th>Net Income/Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 66.9</td>
<td>$ 75.9</td>
<td>$ (9.0)</td>
<td></td>
</tr>
</tbody>
</table>

## Accounts Receivable FY20

<table>
<thead>
<tr>
<th>Item</th>
<th>Revenues</th>
<th>Expenses</th>
<th>Net Income/Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC revenues</td>
<td>4.2</td>
<td></td>
<td>4.2</td>
</tr>
<tr>
<td>IMG Learfield revenues</td>
<td>4.5</td>
<td></td>
<td>4.5</td>
</tr>
</tbody>
</table>

## NCAA Adjustments FY20

<table>
<thead>
<tr>
<th>Item</th>
<th>Revenues</th>
<th>Expenses</th>
<th>Net Income/Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athletic Scholarships</td>
<td>15.7</td>
<td>15.7</td>
<td>-</td>
</tr>
<tr>
<td>Foundation Athletic Expenses</td>
<td>2.7</td>
<td>2.7</td>
<td>-</td>
</tr>
<tr>
<td>Complimentary/Contract tickets</td>
<td>2.1</td>
<td>2.1</td>
<td>-</td>
</tr>
<tr>
<td>Apparel Contract</td>
<td>0.9</td>
<td>0.9</td>
<td>-</td>
</tr>
<tr>
<td>ACC Officials</td>
<td>0.7</td>
<td>0.7</td>
<td>-</td>
</tr>
<tr>
<td>Other accruals</td>
<td>1.5</td>
<td>(0.5)</td>
<td>2.0</td>
</tr>
</tbody>
</table>

| NCAA report                         | 99.2     | 97.5     | 1.7                |
Auditor of Public Accounts Draft Report on Intercollegiate Athletics Programs

KEN MILLER, VICE PRESIDENT FOR FINANCE
MARCH 21, 2021
NCAA Annual Report Overview

- National Collegiate Athletic Association (NCAA) constitution requires an annual Schedule of Revenues and Expenses of Intercollegiate Athletics Program (Schedule).

- Auditor of Public Accounts (APA) performs certain agreed-upon procedures to evaluate the university’s Schedule complies with NCAA rules.

- APA review is in progress and the final report will be provided to the BOV.
  - The university is not aware of any matters identified by the APA requiring adjustments to the Schedule.

- NCAA report differs from the cash basis quarterly financial performance report as it is accrual basis and includes revenues and expenditures for items paid by outside parties (e.g., Virginia Tech Foundation).
Intercollegiate Athletic Programs Revenues & Expenses
FY 2016 - FY 2020
(all dollars in millions)
Intercollegiate Athletic Programs
Net Operating Income (Deficit)
FY 2016 - FY 2020
(all dollars in millions)
Intercollegiate Athletic Programs
Net Operating Income (Deficit)
FY 2020 Unaudited

<table>
<thead>
<tr>
<th></th>
<th>Revenue</th>
<th>Expenses</th>
<th>Net Income/Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Football</td>
<td>$</td>
<td>$ 49.6</td>
<td>$ 34.3</td>
</tr>
<tr>
<td>Men's Basketball</td>
<td>11.3</td>
<td>9.6</td>
<td>1.7</td>
</tr>
<tr>
<td>Women's Basketball</td>
<td>1.1</td>
<td>4.6</td>
<td>(3.5)</td>
</tr>
<tr>
<td>*Other Sports</td>
<td>5.7</td>
<td>21.0</td>
<td>(15.3)</td>
</tr>
<tr>
<td>**Non Program Specific</td>
<td>31.5</td>
<td>28.0</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>$ 99.2</td>
<td>$ 97.5</td>
<td>$ 1.7</td>
</tr>
</tbody>
</table>

*Other Sports is the total of Men’s Other Sports, Women’s Other Sports. There are 16 other sports programs such as baseball, softball, golf, tennis, track & field, etc.

**Non Program Specific includes revenues and expenses that cannot be attributed to a specific sport and support the overall function of the Athletic program.
## Intercollegiate Athletic Programs Reconciliation of Cash to NCAA Report

### FY 2020

*all dollars in millions*

<table>
<thead>
<tr>
<th></th>
<th>Revenues</th>
<th>Expenses</th>
<th>Net Income/Deficit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Basis Per BOV Financial Performance Report</td>
<td>$66.9</td>
<td>$75.9</td>
<td>$(9.0)</td>
</tr>
<tr>
<td>Accounts Receivable FY20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACC revenues</td>
<td>4.2</td>
<td></td>
<td>4.2</td>
</tr>
<tr>
<td>IMG Learfield revenues</td>
<td>4.5</td>
<td></td>
<td>4.5</td>
</tr>
<tr>
<td>NCAA Adjustments FY20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Athletic Scholarships</td>
<td>15.7</td>
<td>15.7</td>
<td>-</td>
</tr>
<tr>
<td>Foundation Athletic Expenses</td>
<td>2.7</td>
<td>2.7</td>
<td>-</td>
</tr>
<tr>
<td>Complimentary/Contract tickets</td>
<td>2.1</td>
<td>2.1</td>
<td>-</td>
</tr>
<tr>
<td>Apparel Contract</td>
<td>0.9</td>
<td>0.9</td>
<td>-</td>
</tr>
<tr>
<td>ACC Officials</td>
<td>0.7</td>
<td>0.7</td>
<td>-</td>
</tr>
<tr>
<td>Other accruals</td>
<td>1.5</td>
<td>(0.5)</td>
<td>2.0</td>
</tr>
<tr>
<td>NCAA report</td>
<td>$99.2</td>
<td>$97.5</td>
<td>$1.7</td>
</tr>
</tbody>
</table>
The Financial Performance Report of income and expenditures is prepared from two sources: actual accounting data as recorded at Virginia Tech and the annual budgets which are also recorded in the university accounting system. The actual accounting data reflect the modified accrual basis of accounting, which recognizes revenues when received rather than when earned and commitments to buy goods and services as encumbrances when obligated and as an expenditure when paid. The Original Budget was approved by the Board of Visitors at the June meeting. The Adjusted Budget reflects adjustments to incorporate actual experience or changes made during the fiscal year. These changes are presented for review and approval by the Finance and Resource Management Committee and the Board of Visitors through this report. Where adjustments impact appropriations at the state level, the university coordinates with the Department of Planning and Budget to ensure appropriations are reflected accurately.

The July to December 2020-21 budget (year-to-date) is prepared from historical data which reflects trends in expenditures from previous years as well as known changes in timing. Differences between the actual income and expenditures and the year-to-date budget may occur for a variety of reasons, such as an accelerated or delayed flow of documents through the accounting system, a change in spending patterns at the college level, or increases in revenues for a particular area.

Quarterly budget estimates are prepared to provide an intermediate measure of income and expenditures. Actual revenues and expenditures may vary from the budget estimates. The projected year-end budgets are, however, the final measure of budgetary performance.

**RECOMMENDATION:**

That the report of income and expenditures for the University Division and the Cooperative Extension/Agricultural Experiment Station Division for the period of July 1, 2020 through December 31, 2020 and the Capital Outlay report be approved.

March 22, 2021
## Educational and General Programs

### University Division

<table>
<thead>
<tr>
<th>Revenues</th>
<th>Actual</th>
<th>Budget</th>
<th>Change</th>
<th>Original</th>
<th>Adjusted</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Fund</td>
<td>$97,790</td>
<td>$97,790</td>
<td>$0</td>
<td>$195,326</td>
<td>$199,043</td>
<td>$3,717</td>
</tr>
<tr>
<td>Tuition and Fees</td>
<td>338,849</td>
<td>337,329</td>
<td>1,520</td>
<td>582,266</td>
<td>600,323</td>
<td>18,057</td>
</tr>
<tr>
<td>All Other Income</td>
<td>20,100</td>
<td>21,586</td>
<td>-1,486</td>
<td>46,900</td>
<td>46,356</td>
<td>-544</td>
</tr>
<tr>
<td>Revenue Contingency</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CARES Act Revenue</td>
<td>5,692</td>
<td>5,692</td>
<td>0</td>
<td>0</td>
<td>5,692</td>
<td>5,692</td>
</tr>
<tr>
<td><strong>Total Revenues</strong></td>
<td>$462,431</td>
<td>$462,397</td>
<td>$34</td>
<td>$799,492</td>
<td>$851,413</td>
<td>$51,921</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expenses</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Programs</td>
<td>$-248,401</td>
<td>$-251,137</td>
<td>$2,736</td>
<td>$-505,125</td>
<td>$-541,129</td>
<td>$-36,004</td>
</tr>
<tr>
<td>Support Programs</td>
<td>-145,151</td>
<td>-147,998</td>
<td>2,847</td>
<td>-294,367</td>
<td>-311,678</td>
<td>-17,311</td>
</tr>
<tr>
<td>Reserve Drawdown</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1,394</td>
<td>1,394</td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td>$-393,552</td>
<td>$-399,135</td>
<td>$5,583</td>
<td>$-799,492</td>
<td>$-851,413</td>
<td>$51,921</td>
</tr>
</tbody>
</table>

| NET                     | $68,879| $63,262| $5,617 | $0       | $0       | $0     |

### CE/AES Division

<table>
<thead>
<tr>
<th>Revenues</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General Fund</td>
<td>$40,581</td>
<td>$40,581</td>
<td>$0</td>
<td>$75,100</td>
<td>$75,064</td>
<td>$-36</td>
</tr>
<tr>
<td>Federal Appropriation</td>
<td>6,818</td>
<td>7,823</td>
<td>-1,005</td>
<td>15,640</td>
<td>15,647</td>
<td>7</td>
</tr>
<tr>
<td>All Other Income</td>
<td>761</td>
<td>645</td>
<td>116</td>
<td>950</td>
<td>950</td>
<td>0</td>
</tr>
<tr>
<td>Revenue Contingency</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-3,000</td>
<td>0</td>
<td>3,000</td>
</tr>
<tr>
<td>CARES Act Revenue</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Revenues</strong></td>
<td>$48,161</td>
<td>$49,051</td>
<td>$-890</td>
<td>$88,690</td>
<td>$91,663</td>
<td>$2,973</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expenses</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Programs</td>
<td>$-40,131</td>
<td>$-42,234</td>
<td>$2,103</td>
<td>$-82,286</td>
<td>$-85,259</td>
<td>$-2,973</td>
</tr>
<tr>
<td>Support Programs</td>
<td>-2,522</td>
<td>-2,623</td>
<td>101</td>
<td>-6,404</td>
<td>-6,404</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td>$-42,653</td>
<td>$-44,857</td>
<td>$2,204</td>
<td>$-88,690</td>
<td>$-91,663</td>
<td>$-2,973</td>
</tr>
</tbody>
</table>

| NET                     | $5,508 | $4,194 | $1,314 | $0       | $0       | $0     |

### Auxiliary Enterprises

<table>
<thead>
<tr>
<th>Revenues</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$152,754</td>
<td>$146,571</td>
<td>$6,183</td>
<td>(4)</td>
<td>$350,059</td>
<td>$268,792</td>
<td>$-81,267</td>
</tr>
<tr>
<td>Expenses</td>
<td>-147,751</td>
<td>-165,724</td>
<td>17,973</td>
<td>(4)</td>
<td>-336,392</td>
<td>-321,446</td>
</tr>
<tr>
<td>Reserve Drawdown/(Deposit)</td>
<td>-5,003</td>
<td>19,153</td>
<td>-24,156</td>
<td>(4)</td>
<td>-13,667</td>
<td>52,654</td>
</tr>
</tbody>
</table>

| NET                     | $0     | $0     | $0     | $0       | $0       | $0     |

### Sponsored Programs

<table>
<thead>
<tr>
<th>Revenues</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$152,208</td>
<td>$165,068</td>
<td>$-12,860</td>
<td>(5)</td>
<td>$352,358</td>
<td>$355,254</td>
<td>$2,896</td>
</tr>
<tr>
<td>CARES ACT Revenue</td>
<td>835</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Expenses</td>
<td>-169,377</td>
<td>-180,584</td>
<td>11,207</td>
<td>(5)</td>
<td>-352,358</td>
<td>-355,254</td>
</tr>
<tr>
<td>Reserve Drawdown/(Deposit)</td>
<td>16,334</td>
<td>15,516</td>
<td>818</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

| NET                     | $0     | $0     | $0     | $0       | $0       | $0     |

### Student Financial Assistance

<table>
<thead>
<tr>
<th>Revenues</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$16,778</td>
<td>$17,058</td>
<td>$-280</td>
<td>$31,678</td>
<td>$35,962</td>
<td>$35,962</td>
<td>$4,284</td>
</tr>
<tr>
<td>Expenses</td>
<td>-16,801</td>
<td>-17,665</td>
<td>864</td>
<td>-31,678</td>
<td>-35,962</td>
<td>-4,284</td>
</tr>
<tr>
<td>Reserve Drawdown/(Deposit)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

| NET                     | $-23   | $-607  | $584   | $0       | $0       | $0     |

### All Other Programs *

| Revenue                | $8,628 | $9,099 | $-470  | $10,214  | $15,839  | $5,625 |
| Expenses                | -2,638 | -6,987 | 4,349  | (7) | -10,214  | -13,770 | -3,556 |
| Reserve Drawdown/(Deposit) | -5,990| -2,111 | -3,879 | 0        | 0        | 2,069  |

| NET                     | $0     | $0     | $0     | $0       | $0       | $0     |

### Total University

| Revenues                | $841,794| $849,243| $-7,448 | $1,632,491| $1,618,923| $-13,568 |
| Expenses                | -772,772| -814,952| 42,180  | -1,618,824| -1,699,508| -50,684 |
| Reserve Drawdown/(Deposit) | 5,341| 32,558 | -27,217 | -13,667 | 50,585 | 64,252 |

| NET                     | $74,363| $66,649| $7,515  | $0       | $0       | $0     |

---

* All Other Programs include federal work study, surplus property, local funds, and unique military activities.

Presentation Date: March 21, 2021
1. All Other Income revenues are lower than projected due to lower Continuing Education activity level and the timing of revenues in the newly established Animal Cancer Care and Research Center.

2. Expenditures are lower than projected due to timing and the impact of the university’s essential spending order in response to COVID-19 pandemic.

3. The budget for federal revenue is established to match projected allotments from the federal government that are expected to be drawn down during the state fiscal year. All expenses in federal programs are covered by drawdowns of federal revenue up to allotted amounts. Federal revenue in the Cooperative Extension and Agriculture Experiment Station Division is lower than projected due to the timing of federal expense.

4. Quarterly and projected annual variances are explained in the Auxiliary Enterprises section of this report.

5. Historical patterns have been used to develop a measure of the revenue and expenditure activity for Sponsored Programs. Actual revenues and expenses may vary from the budget estimates because projects are initiated and concluded on an individual basis without regard to fiscal year. Total sponsored research revenues and expenditures are lower than projected. The sponsored expenditures are 5.6% lower than December 31, 2019.

6. The federal government allocated $9.7 million of CARES Act support to provide emergency financial grants to students, of which $8.9 million was awarded and reimbursed in fiscal year 2019-20. The remaining $0.8 million was awarded and reimbursed in early fiscal year 2020-21.

7. Expenses for All Other Programs were lower than projected due to timing and lower than projected Surplus Property activity.

8. The annual budget for the University Division General Fund was decreased $0.29 million for the state share of salary and fringe benefit rate changes and increased $4.0 million for a one-time allocation to support operations, aid or other purposes to address the COVID-19 impact.

9. In late June, the budget for Tuition and Fees was increased $14.0 million for planned Fall 2020 enrollment growth. After summer census, the tuition and fee budget was increased by $8.1 million for higher than projected summer 2020 enrollment. After fall census, the tuition and fee budget was decreased $4 million for lower than projected nonresident freshman and graduate enrollments. The corresponding expenditure budgets have been adjusted accordingly.

10. The All Other Income revenue budget for the University Division were increased $0.6 million for lower than projected revenues in the College of Veterinary Medicine Teaching Hospital, the establishment of the Animal Cancer Care and Research Center and the ViTALs Lab in the College of Veterinary Medicine, decreased $1.7 million for Continuing Education Program revenues, decreased $0.2 million for the temporary suspension of the Campus to Campus shuttle service, and increased $0.8 million for other income adjustments. The corresponding expenditure budgets have been adjusted accordingly.

11. The University Division revenue budget was increased $25 million to remove the revenue contingency established for potential financial impacts due to COVID-19. The corresponding expenditure budget increase includes restoration of 2% of the preliminary expenditure budget reductions in the University Division. A 3% budget reduction remains to manage cost escalation, unfunded mandates, the fall enrollment shortfall, and impacts of COVID-19.

12. The University Division revenue budget was increased $5.7 million to align the internal budget with the Commonwealth of Virginia’s allocation of Coronavirus Relief Funds in support of personal protective equipment, disinfectant, distance learning, telework, and public health costs. The corresponding expenditure budgets have been adjusted accordingly.

13. University Division E&G expenditure budget increased $1.4 million to reflect the carryforward of unexpected Coronavirus Relief Funds received in 2019-20 due to the timing of expenditures.

14. The Cooperative Extension/Agriculture Experiment State Division General Fund revenue budget was decreased $0.04 million for the state share of fringe benefit rate changes. The corresponding expenditure budgets have been adjusted accordingly.

15. The Cooperative Extension Federal Funds revenue budget was increased $0.01 million to align with federal appropriations. The corresponding expenditure budgets have been adjusted accordingly.
16. The Cooperative Extension/Agriculture Experiment Station budget was increased $3.0 million to restore the revenue contingency established in response to the uncertainty in state revenues. The corresponding expenditure budget increase will restore the 5.0% expenditure preliminary budget reduction in the Cooperative Extension/Agriculture Experiment Station.

17. The Agency 229 E&G revenue budget has been increased $0.002 million for CARES grant support received for the Tazewell VCE division. The corresponding expenditure budgets have been adjusted accordingly.

18. The annual budget for the Sponsored Programs has been increased $0.6 million to reflect the finalization of the enterprise fund budgets and $2.25 million to reflect the approved Commonwealth Cyber Initiative expenditure plan.

19. The Student Financial Assistance revenue and expenditure budgets were increased $4.1 million for finalization of the scholarship budget and technical accounting changes and $0.2 million for the SCHEV GEAR Up scholarship program.

20. The projected annual budgets for All Other Programs were increased $3.2 million to finalize budgets and $2.4 million for federal revenue earmarked for Kentland Farm capital lease. The projected annual expense budgets were increased $3.2 million to finalize budgets and $0.4 million for outstanding 2019-20 commitments that were initiated but not completed before June 30, 2020.
### Residence and Dining Halls *

<table>
<thead>
<tr>
<th></th>
<th>July 1, 2020 to December 31, 2020</th>
<th>Annual Budget for 2020-21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual</td>
<td>Budget</td>
</tr>
<tr>
<td>Revenues</td>
<td>$50,687</td>
<td>$45,546</td>
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<tr>
<td>Expenses</td>
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<tr>
<td><strong>Net</strong></td>
<td>$0</td>
<td>$0</td>
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<tr>
<td></td>
<td>$5,141 (1)</td>
<td>$5,141 (1)</td>
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<tr>
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### Parking and Transportation

<table>
<thead>
<tr>
<th></th>
<th>July 1, 2020 to December 31, 2020</th>
<th>Annual Budget for 2020-21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual</td>
<td>Budget</td>
</tr>
<tr>
<td>Revenues</td>
<td>$8,285</td>
<td>$8,338</td>
</tr>
<tr>
<td>Expenses</td>
<td>-4,396</td>
<td>-4,910</td>
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<td>Reserve Drawdown/(Deposit)</td>
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<td>-3,428</td>
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<tr>
<td><strong>Net</strong></td>
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<td>$0</td>
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### Telecommunications Services

<table>
<thead>
<tr>
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<th>July 1, 2020 to December 31, 2020</th>
<th>Annual Budget for 2020-21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual</td>
<td>Budget</td>
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<tr>
<td>Revenues</td>
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<td>Expenses</td>
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<td>Reserve Drawdown/(Deposit)</td>
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### University Services * **

<table>
<thead>
<tr>
<th></th>
<th>July 1, 2020 to December 31, 2020</th>
<th>Annual Budget for 2020-21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual</td>
<td>Budget</td>
</tr>
<tr>
<td>Revenues</td>
<td>$28,576</td>
<td>$29,382</td>
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<td>Expenses</td>
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<td>-31,141</td>
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<td>Reserve Drawdown/(Deposit)</td>
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### Intercollegiate Athletics *

<table>
<thead>
<tr>
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<th>July 1, 2020 to December 31, 2020</th>
<th>Annual Budget for 2020-21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual</td>
<td>Budget</td>
</tr>
<tr>
<td>Revenues</td>
<td>$22,887</td>
<td>$22,143</td>
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<td>Expenses</td>
<td>-36,553</td>
<td>-39,529</td>
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### Electric Service *

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<th>Annual Budget for 2020-21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual</td>
<td>Budget</td>
</tr>
<tr>
<td>Revenues</td>
<td>$14,285</td>
<td>$14,339</td>
</tr>
<tr>
<td>Expenses</td>
<td>-15,571</td>
<td>-16,182</td>
</tr>
<tr>
<td>Reserve Drawdown/(Deposit)</td>
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<td>3,367</td>
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<tr>
<td><strong>Net</strong></td>
<td>$0</td>
<td>$0</td>
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### Inn at VT/Skelton Conf. Center

<table>
<thead>
<tr>
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<th>July 1, 2020 to December 31, 2020</th>
<th>Annual Budget for 2020-21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual</td>
<td>Budget</td>
</tr>
<tr>
<td>Revenues</td>
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<td>$1,929</td>
</tr>
<tr>
<td>Expenses</td>
<td>-4,663</td>
<td>-5,296</td>
</tr>
<tr>
<td>Reserve Drawdown/(Deposit)</td>
<td>2,824</td>
<td>3,367</td>
</tr>
<tr>
<td><strong>Net</strong></td>
<td>$0</td>
<td>$0</td>
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</table>

### Other Enterprise Functions ***

<table>
<thead>
<tr>
<th></th>
<th>July 1, 2020 to December 31, 2020</th>
<th>Annual Budget for 2020-21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual</td>
<td>Budget</td>
</tr>
<tr>
<td>Revenues</td>
<td>$15,289</td>
<td>$14,001</td>
</tr>
<tr>
<td>Expenses</td>
<td>-3,167</td>
<td>-4,491</td>
</tr>
<tr>
<td>Reserve Drawdown/(Deposit)</td>
<td>-12,122</td>
<td>-9,510</td>
</tr>
<tr>
<td><strong>Net</strong></td>
<td>$0</td>
<td>$0</td>
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### TOTAL AUXILIARIES

<table>
<thead>
<tr>
<th></th>
<th>July 1, 2020 to December 31, 2020</th>
<th>Annual Budget for 2020-21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>$152,754</td>
<td>$146,571</td>
</tr>
<tr>
<td>Expenses</td>
<td>-147,751</td>
<td>-165,724</td>
</tr>
<tr>
<td>Reserve Drawdown/(Deposit)</td>
<td>-5,003</td>
<td>19,153</td>
</tr>
<tr>
<td><strong>Net</strong></td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>
1. Revenues in Residence and Dining Halls is higher than projected due to higher than anticipated meal plan revenues and quarantine space agreements. Expenses are lower than projected due to holding back expenditures and timing of operating expenses. A third quarter budget adjustment is anticipated to further align the budget for anticipated spring business volume.

2. Expenses in Telecommunications Services are lower than projected due to holding back expenditures and timing of network telecommunication projects.

3. Revenues for the University Services System are lower than projected due to timing of pouring rights contract payments and lower than projected recreational sports self-generated revenues. Expenses are lower than projected due to timing of operating expenses and decreased business volume.

4. Revenues for Intercollegiate Athletics are higher than projected due to better than projected ACC Network revenues, partially offset by timing of pouring rights contract payments. Expenses are lower than projected due to lower business volume and timing of operating expenses. A third quarter budget adjustment is anticipated to further align the budget for additional financial impacts of the pandemic. Note, due to a delay in timing, Athletic revenues includes $5.1 million radio partner and $4.8 million ACC network revenue budgeted in 2019-20 but received in 2020-21.

5. Revenues for Other Enterprise Functions are higher than projected due to higher than budgeted student enrollment. Expenses are lower than projected due to timing of operating expenses and decreased business volume.

6. In late June, the annual revenue, expense, and reserve budgets for Auxiliary Enterprises were adjusted for technical alignments and finalization of fixed cost estimates.

7. The annual revenue, expense, and reserve budgets for Auxiliary Enterprises were adjusted to align budgets for the known financial impacts (through December 31, 2020) of the COVID-19 pandemic as summarized in the table below:
8. The annual expense budget for Auxiliary Enterprises was increased $8.0 million for outstanding 2019-20 commitments and projects that were initiated but not completed before June 30, 2020. This amount includes $2.3 million in Recreational Sports commitments and projects, $1.6 million for Dining Services, $0.8 million for Telecommunications, and $0.4 million for Electric Service. The remainder is spread across the other auxiliary programs.

9. The annual expense budgets for University Services System were increased $0.2 million for Schiffert Health Center compensation market alignment.

10. The annual revenue and reserve budgets for Intercollegiate Athletics were decreased $1.7 million for lower pre-pandemic ACC conference distributions. Annual revenue, expense, and reserve budgets were increased $0.3 million for private support of four football positions, $1.1 million for Student Athlete Performance Center debt service, and $0.7 million for operating scholarship support.

11. The annual expense budget for the Electric Service auxiliary was decreased $0.7 million for debt service alignment for Lane Substation capital project savings.

12. The annual revenue and expense budgets for Other Enterprise Functions were increased $7.6 million for the Commonwealth of Virginia’s Coronavirus Relief Funding, Pouring Rights contract operating expenses, and scholarship expenses in Licensing and Trademark.
### Educational and General Projects

#### Design Phase

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Fiscal Year</th>
<th>Annual Initiated</th>
<th>Annual Support</th>
<th>Annual YTD Budget</th>
<th>Annual Bond Expenditures</th>
<th>Total Budget</th>
<th>Total Bond</th>
<th>Cumulative Bond</th>
<th>Cumulative Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock &amp; Poultry Research Facilities, Phase I</td>
<td>Oct 2016</td>
<td>$9,500</td>
<td></td>
<td>$447</td>
<td>$25,274</td>
<td>$-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Planning: Hitt Hall &amp; New Dining</td>
<td>Apr 2017</td>
<td>1,500</td>
<td>120</td>
<td>-</td>
<td>6,000</td>
<td>6,000</td>
<td>-</td>
<td>3,598</td>
<td>(2)</td>
</tr>
<tr>
<td>Planning: Undergraduate Science Laboratory Building</td>
<td>Jul 2017</td>
<td>1,110</td>
<td>298</td>
<td>-</td>
<td>5,516</td>
<td>5,516</td>
<td>-</td>
<td>4,616</td>
<td>(3)</td>
</tr>
<tr>
<td>Commonwealth Cyber Initiative</td>
<td>May 2019</td>
<td>667</td>
<td>209</td>
<td>1,500</td>
<td>1,500</td>
<td>1,500</td>
<td>-</td>
<td>1,043</td>
<td>(4)</td>
</tr>
<tr>
<td>Corps Leadership and Military Science Building</td>
<td>Jun 2019</td>
<td>4,500</td>
<td>1,211</td>
<td>-</td>
<td>20,650</td>
<td>31,350</td>
<td>-</td>
<td>52,000</td>
<td>(5)</td>
</tr>
<tr>
<td>Data and Decision Science Building</td>
<td>Jul 2019</td>
<td>10,500</td>
<td>2,286</td>
<td>69,000</td>
<td>-</td>
<td>10,000</td>
<td>79,000</td>
<td>4,678</td>
<td>(6)</td>
</tr>
<tr>
<td>Innovation Campus - Academic Building</td>
<td>Jul 2019</td>
<td>20,000</td>
<td>7,309</td>
<td>168,000</td>
<td>-</td>
<td>107,000</td>
<td>275,000</td>
<td>8,940</td>
<td>(7)</td>
</tr>
<tr>
<td>Planning: Randolph Hall Replacement</td>
<td>Jul 2020</td>
<td>3,000</td>
<td>-</td>
<td>-</td>
<td>11,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Life, Health, Safety, Accessibility, &amp; Code Compliance</td>
<td>Jul 2020</td>
<td>300</td>
<td>0</td>
<td>3,100</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3,100</td>
<td>(8)</td>
</tr>
<tr>
<td>Fralin Biomedical Research Institute Equipment</td>
<td>Jul 2020</td>
<td>6,000</td>
<td>-</td>
<td>18,133</td>
<td>-</td>
<td>18,133</td>
<td>-</td>
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#### Construction Phase

<table>
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<tr>
<th>Project Description</th>
<th>Fiscal Year</th>
<th>Annual Initiated</th>
<th>Annual Support</th>
<th>Annual YTD Budget</th>
<th>Annual Bond Expenditures</th>
<th>Total Budget</th>
<th>Total Bond</th>
<th>Cumulative Bond</th>
<th>Cumulative Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance Reserve</td>
<td>On-going</td>
<td>11,600</td>
<td>5,806</td>
<td>16,099</td>
<td>-</td>
<td>16,099</td>
<td>-</td>
<td>5,806</td>
<td>(11)</td>
</tr>
<tr>
<td>Chiller Plant Phase II</td>
<td>Oct 2016</td>
<td>16,000</td>
<td>4,423</td>
<td>32,655</td>
<td>10,312</td>
<td>42,968</td>
<td>27,854</td>
<td>28,764</td>
<td>(12)</td>
</tr>
<tr>
<td>Holden Hall Renovation</td>
<td>Oct 2016</td>
<td>36,000</td>
<td>13,276</td>
<td>57,215</td>
<td>212</td>
<td>74,927</td>
<td>24,366</td>
<td>-</td>
<td>(13)</td>
</tr>
<tr>
<td>Construct Virginia Seafood AREC</td>
<td>Jul 2018</td>
<td>2,500</td>
<td>141</td>
<td>2,500</td>
<td>-</td>
<td>2,500</td>
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<td>141</td>
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#### Close-Out

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<thead>
<tr>
<th>Project Description</th>
<th>Fiscal Year</th>
<th>Annual Initiated</th>
<th>Annual Support</th>
<th>Annual YTD Budget</th>
<th>Annual Bond Expenditures</th>
<th>Total Budget</th>
<th>Total Bond</th>
<th>Cumulative Bond</th>
<th>Cumulative Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve Kentland Facilities</td>
<td>Sep 2013</td>
<td>3,100</td>
<td>2,507</td>
<td>12,463</td>
<td>-</td>
<td>12,463</td>
<td>11,328</td>
<td>11,328</td>
<td>(15)</td>
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<tr>
<td>VTC Biomedical Research Expansion</td>
<td>Oct 2016</td>
<td>8,784</td>
<td>1,362</td>
<td>51,554</td>
<td>5,267</td>
<td>34,875</td>
<td>91,696</td>
<td>82,274</td>
<td>(16)</td>
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<tr>
<td>Gas-Fired Boiler at the Central Steam Plant</td>
<td>Apr 2017</td>
<td>1,600</td>
<td>753</td>
<td>-</td>
<td>8,200</td>
<td>8,200</td>
<td>7,238</td>
<td>-</td>
<td>(17)</td>
</tr>
<tr>
<td>Acquisition: Falls Church Property</td>
<td>Apr 2019</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2,850</td>
<td>2,850</td>
<td>-</td>
<td>-</td>
<td>(18)</td>
</tr>
</tbody>
</table>

### Total Educational and General Projects

<p>| | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td><strong>TOTAL EDUCATIONAL AND GENERAL PROJECTS</strong></td>
<td>$136,661</td>
<td>$40,148</td>
<td>$457,493</td>
<td>$67,157</td>
<td>$203,575</td>
<td>$728,225</td>
<td>$186,327</td>
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<td></td>
</tr>
</tbody>
</table>
1. **Livestock & Poultry Research Facilities, Phase I**: This project is the first of two phases to renew existing facilities for the livestock and poultry programs. The scope includes 126,000 gross square feet of facilities at the Blacksburg campus and three nearby university production and research farms. Invitation for bids for the beef facility is underway. Construction contracts are underway for the swine, poultry, and equine facilities. Bid packages for three hay barns and demolition of certain facilities are under development.

2. **Planning: Hitt Hall & New Dining**: This planning project is for Hitt Hall and houses an expansion of Myers-Lawson School of Construction, a new dining center, and other academic spaces. Project is in schematic design with advancement into preliminary design expected late January 2021.

3. **Planning: Undergraduate Science Laboratory Building**: This planning project is for an entirely state funded 102,000 gross square foot science laboratory building adjacent to the new classroom building. The university is temporarily funding the project and the state will reimburse the university when construction funding is appropriated. Working drawings were completed September 25, 2020. The university is requesting 2021 General Assembly Session.

4. **Commonwealth Cyber Initiative**: This project makes improvements to support the Commonwealth Cyber Initiative Hub renovations, space enhancements, and equipment. The maximum appropriation from the Commonwealth is $3.5 million.

5. **Corps Leadership and Military Science Building**: The project consolidates the Corps of Cadets and ROTC programs in the northern portion of the Upper Quad project. A Guaranteed Maximum Price within budget has been finalized.

6. **Data and Decision Science Buildings**: This project will design and construct a new 120,000 gross square foot instruction building. The Guaranteed Maximum Price received December 2020 was within budget with construction anticipated February 2021.

7. **Innovation Campus – Academic Building**: This project is a new 300,000 gross square foot academic building as part of the Innovation Campus in Alexandria Virginia. Preliminary design is underway.

8. **Planning: Randolph Hall Replacement**: This planning project will design the replacement of Randolph Hall with a 284,000 gross square foot building to accommodate engineering instruction and research. A/E procurement is underway. The university will request construction funding as part of the 2023 state budget call.

9. **Life, Health, Safety, Accessibility, & Code Compliance**: This project improves pedestrian connectors to ensure accessible service in the North Academic District. Schematic design is underway.

10. **Fralin Biomedical Research Institute Equipment**: This funding supports the VTC Biomedical Expansion project located in Roanoke and will provide the equipment authorized by the 2020 Acts of Assembly.

11. **Maintenance Reserve**: The total project budget reflects $2.73 million of carryforward from fiscal year 2020 and the State’s fiscal year 2021 appropriation of $13.73 million. The total annual budget amount reflects the pace necessary to meet the state’s 85 percent spending performance requirement by June 30, 2021.

12. **Chiller Plant Phase II**: This project upgrades campus utility systems and addresses several strategic priorities by shifting the campus to a lower resource consuming cooling service with improved redundancies. Completion expected August 2021.

13. **Holden Hall Renovation**: This project will renovate 20,000 gross square feet, demolish 21,000 gross square feet, and construct an 80,000 gross square foot expansion of Holden Hall. Construction is underway with substantial completion expected early January 2022.

14. **Construct Virginia Seafood AREC**: Through a collaborative effort between the university, the Foundation, and the City of Hampton, the existing facility will be replaced with this new 15,000 gross square foot facility. The Foundation received a successful construction bid and substantial completion is expected September 2021.

15. **Improve Kentland Facilities**: The project is substantially complete and the total cost is expected to be $12.463 million. The project may be closed and financial accounts terminated when final invoices are received and paid.

16. **VTC Biomedical Research Expansion**: The project is substantially complete and the total cost is expected to be $89.696 million. The project may be closed and financial accounts terminated when final invoices are received and paid.

17. **Gas-Fired Boiler at the Central Steam Plant**: This project is substantially complete and the total cost is expected to be $8.2 million. The project may be closed and financial accounts terminated when final invoices are received and paid.

18. **Acquisition: Falls Church Property**: This project was established to acquire the fee simple title to the 5.33 acres currently leased from and owned by the City of Falls Church for a net cost of $2.85 million. The exercise date is calendar year 2021, and the university is working with the City of Falls Church on this transaction.

"Presentation Date: March 21, 2021"
### AUXILIARY ENTERPRISE PROJECTS

#### Design Phase

<table>
<thead>
<tr>
<th>Project</th>
<th>Initiated</th>
<th>Annual Budget</th>
<th>YTD Expenditures</th>
<th>State Support Fund</th>
<th>Nongeneral Revenue Fund</th>
<th>Bond Budget</th>
<th>Cumulative Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Wellness Improvements</td>
<td>Jun 2016</td>
<td>$10,000</td>
<td>$66</td>
<td>-</td>
<td>$13,310</td>
<td>$44,690</td>
<td>$58,000</td>
</tr>
<tr>
<td>Planning: Tennis Center Improvements</td>
<td>Aug 2016</td>
<td>$584</td>
<td>69</td>
<td>-</td>
<td>809</td>
<td>809</td>
<td>294 (2)</td>
</tr>
<tr>
<td>Dietrick First Floor and Plaza Renovation</td>
<td>Sept 2017</td>
<td>2,000</td>
<td>23</td>
<td>-</td>
<td>5,000</td>
<td>3,300</td>
<td>8,300</td>
</tr>
<tr>
<td>Planning: Slusher Hall Replacement</td>
<td>Jun 2018</td>
<td>10</td>
<td>9</td>
<td>-</td>
<td>3,500</td>
<td>3,500</td>
<td>1,264 (4)</td>
</tr>
<tr>
<td>Global Business &amp; Analytics Complex Residence Halls</td>
<td>Jun 2019</td>
<td>1,100</td>
<td>-</td>
<td>-</td>
<td>84,000</td>
<td>84,000</td>
<td>1,269 (5)</td>
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<tr>
<td>New Upper Quad Residence Hall</td>
<td>Jun 2019</td>
<td>3,500</td>
<td>701</td>
<td>-</td>
<td>40,000</td>
<td>40,000</td>
<td>1,535 (6)</td>
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</table>

#### Construction Phase

<table>
<thead>
<tr>
<th>Project</th>
<th>Initiated</th>
<th>Annual Budget</th>
<th>YTD Expenditures</th>
<th>State Support Fund</th>
<th>Nongeneral Revenue Fund</th>
<th>Bond Budget</th>
<th>Cumulative Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance Reserve</td>
<td>On-going</td>
<td>15,000</td>
<td>6,884</td>
<td>-</td>
<td>15,000</td>
<td>15,000</td>
<td>6,884 (7)</td>
</tr>
<tr>
<td>Creativity &amp; Innovation District LLC</td>
<td>Oct 2016</td>
<td>44,000</td>
<td>25,314</td>
<td>-</td>
<td>15,880</td>
<td>89,620</td>
<td>105,500</td>
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</table>

#### Close-Out

<table>
<thead>
<tr>
<th>Project</th>
<th>Initiated</th>
<th>Annual Budget</th>
<th>YTD Expenditures</th>
<th>State Support Fund</th>
<th>Nongeneral Revenue Fund</th>
<th>Bond Budget</th>
<th>Cumulative Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lane Substation Expansion</td>
<td>Sept 2015</td>
<td>17</td>
<td>17</td>
<td>-</td>
<td>2,000</td>
<td>4,500</td>
<td>6,500</td>
</tr>
<tr>
<td>Student-Athlete Performance Center</td>
<td>Mar 2018</td>
<td>8,400</td>
<td>7,158</td>
<td>-</td>
<td>20,417</td>
<td>-</td>
<td>20,417</td>
</tr>
<tr>
<td>Athletics Weight Room Renovation &amp; Expansion</td>
<td>Aug 2018</td>
<td>2,000</td>
<td>1,674</td>
<td>-</td>
<td>4,500</td>
<td>-</td>
<td>4,500</td>
</tr>
</tbody>
</table>

**TOTAL AUXILIARY ENTERPRISE PROJECTS**

<p>| | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
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<tbody>
<tr>
<td></td>
<td>$86,611</td>
<td>$41,917</td>
<td>$-</td>
<td>$80,415</td>
<td>$266,110</td>
<td>$346,525</td>
<td>$115,243</td>
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</table>

**GRAND TOTAL**

<p>| | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td></td>
<td>$223,272</td>
<td>$82,065</td>
<td>$457,493</td>
<td>$147,573</td>
<td>$469,685</td>
<td>$1,074,751</td>
<td>$301,570</td>
<td></td>
</tr>
</tbody>
</table>

Presentation Date: March 21, 2021
**Auxiliary Enterprise Projects**

1. **Student Wellness Improvements**: The project scope and budget includes refurbishments to War Memorial Hall and McComas Hall. Whiting-Turner is the construction manager and the Guaranteed Maximum Price received July 2020 is 33% over budget. The university is developing a path forward to deliver the project within budget by adjusting the project scope.

2. **Planning: Tennis Center Improvements**: Working drawings are underway. The university may request full project authorization once planning is complete and Athletics has raised the necessary funds to complete construction.

3. **Dietrick First Floor and Plaza Renovation**: This project refurbishes the first floor of Dietrick Hall, inserting a modern food service venue, enclosing a portion of the overhang, and improvements to the outdoor plaza. The low bid received May 2020 was over budget. The university has developed a path forward to implement the improvements to Dietrick Hall with the approved budget and to seek private support for improvements to the outdoor plaza, which may be implemented separately when private support is secured.

4. **Planning: Slusher Hall Replacement**: This planning project includes completing preliminary designs for the replacement of Slusher Hall. The initial programming is over budget. The university is exploring alternative development approaches to deliver this project and the Global Business & Analytics Complex Residence Halls project.

5. **Global Business & Analytics Complex Residence Halls**: This project provides two residence halls in the northwest corner of campus with a minimum of 700 beds. The initial programming is over budget. The university is exploring alternative development approaches to deliver this project and the Slusher Hall Replacement project.

6. **New Upper Quad Residence Hall**: This project will provide the Corps of Cadets an additional 300 beds while replacing Femoyer Hall. Preliminary design is underway. A $7 million supplement was approved at the November 2020 Board of Visitors meeting increasing the total project authorization from $33 million to $40 million. Working drawings are underway with pricing expected June 2021.

7. **Maintenance Reserve**: The auxiliary maintenance reserve program covers 106 assets with a total replacement value of $1.4 billion. Projects are scheduled and funded by the auxiliary enterprises. The units prepare five-year plans that outline their highest priority deferred maintenance needs. The annual budget and total project budget reflect the spending plans of the auxiliary units on maintenance reserve work scheduled for fiscal year 2021.

8. **Creativity & Innovation District Living Learning Community (LLC)**: This project is a new residential community with approximately 596 beds, including 176 beds for student-athletes, and academic collaborative spaces to support creativity and innovation programs. Construction is underway with completion expected July 2021.

9. **Lane Substation Expansion**: The project is closed and will be removed from the report at the end of the fiscal year.

10. **Student-Athlete Performance Center**: The project is substantially complete and the total cost is expected to be $20.417 million. The project may be closed and financial accounts terminated when final invoices are received and paid.

11. **Athletics Weight Room Renovation & Expansion**: The project is substantially complete and the total cost is expected to be $4.5 million. The project may be closed and financial accounts terminated when final invoices are received and paid.
Financial Performance Report
July 1, 2020 – December 31, 2020
TIM HODGE, ASSOCIATE VICE PRESIDENT FOR
BUDGET AND FINANCIAL PLANNING

BOB BROYDEN, ASSOCIATE VICE PRESIDENT FOR
CAMPUS PLANNING AND CAPITAL FINANCING

MARCH 21, 2021
### Annual Budget Changes

- State Special Session: $4 million increase in General Funds to support one-time pandemic costs

- Commonwealth of Virginia’s Coronavirus Relief Fund Allocation: $5.7 million increase for E&G portion of $13 million to cover PPE, testing, and other pandemic costs

- Establishment of Virginia Tech Animal Laboratory Services (ViTALS) as self-supporting ancillary: increase $1.5 million

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### Financial Performance

- University Division: minor timing variances

- Expenditures lower than projected due to timing and the impact of the essential spending order in response to the COVID-19 pandemic
Auxiliary Enterprises
2nd Quarter - 2020-21

Annual Budget Changes

- Carryover of outstanding commitments and obligations of $8 million
- COVID-19: revenue decrease of ($5.8 million), lower expenses of $3.2 million, net of ($2.6 million):
  - Intercollegiate Athletics ($1.8 million)
  - Other Enterprise Functions ($0.8 million)
This brings total COVID impact through December 31, 2020 to ($91.4) million decrease in revenue and $28.2 million expense savings, for a net of ($63.2) million
- Commonwealth of Virginia’s Coronavirus Relief Fund Allocation: increase of $7.6 million in Auxiliary share

Financial Performance

- Residence and Dining Halls: higher than projected revenue due to meal plan sales and federal funds for quarantine space; a 3rd quarter budget adjustment will align the budget
- Held back expenditures in response to COVID-19
- Continue to closely monitor financial performance with Auxiliary units
Sponsored Program Expenditures

2019-20 VS. 2020-21

*Other includes Enterprise Funds, Royalty, and Research Ancillary Activity
## Capital Outlay Total Program

<table>
<thead>
<tr>
<th>Quarter Ended</th>
<th>Total Projects = 29</th>
<th>Total Budget Dollars in Thousands</th>
<th>Total Expenditures Dollars in Thousands</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Quarter Ended</td>
<td></td>
<td>$1,067,751</td>
<td>$268,331</td>
</tr>
<tr>
<td></td>
<td>Board Action Nov. 2020</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>New Upper Quad Supplement</td>
<td>7,000</td>
<td></td>
</tr>
<tr>
<td>2nd Quarter Ended</td>
<td></td>
<td>$1,074,751</td>
<td>$301,570</td>
</tr>
</tbody>
</table>

16 Design
6 Construction
7 Closeout
Timing for Construction Pricing

- Data and Decision Science: December 2020
- Corps Leadership & Military Science Building: January 2021
- Livestock & Poultry Research Facilities, Phase I: March 2021
- New Upper Quad Residence Hall: June 2021
- Innovation Campus-Academic Building, Foundations Package: July 2021
- Undergraduate Science Laboratory Building: July 2021
- Hitt Hall & New Dining Center: October 2021
- Innovation Campus-Academic Building, Building Package: February 2022
- Life, Health, Safety, Accessibility & Code Compliance: June 2022
- Randolph Hall Replacement: June 2023

Total Cost: $196,274,000
Construction Spending
Through December 31, 2020

<table>
<thead>
<tr>
<th>Expected Occupancy</th>
<th>Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance Reserve On-going</td>
<td>$12,690</td>
</tr>
<tr>
<td>Creativity and Innovation LLC July 2021</td>
<td>25,314</td>
</tr>
<tr>
<td>Chiller Plant, Phase II August 2021</td>
<td>4,423</td>
</tr>
<tr>
<td>Construct Seafood AREC September 2021</td>
<td>141</td>
</tr>
<tr>
<td>Holden Hall Renovation January 2022</td>
<td>13,276</td>
</tr>
</tbody>
</table>

Construction Expenditures through Dec. 31, 2020

$55,844
## Key Program Updates

### Successful Awards
- Data and Decision Science
- Corps Leadership and Military Science
- Three packages for Livestock & Poultry Research Facilities, Phase I
- Multi-Modal Transit Facility (Town project on VT land)

### Substantial Completions
- Student Athlete Performance Center
- Kentland Improvements, Ph. II

### Project Delivery Strategies
- Seven projects had been under review for cost overruns
- Action plans for four projects underway
- Exploring a new Student Life Village concept and have initiated a master plan effort to address the remaining projects
RECOMMENDATION:
That the report of income and expenditures for the University Division and the Cooperative Extension/Agricultural Experiment Station Division for the period of July 1, 2020 through December 31, 2020 and the Capital Outlay report be approved.

March 22, 2021
Discussion of Future Agenda Topics and Closing Remarks

ED BAINE
CHAIR, FINANCE AND RESOURCE MANAGEMENT COMMITTEE
# Open Session Agenda

**GOVERNANCE AND ADMINISTRATION COMMITTEE**

1872 Salon, The Inn at Virginia Tech  
12:00 – 12:30 pm  
March 22, 2021

## OPEN SESSION

<table>
<thead>
<tr>
<th>Agenda Item</th>
<th>Reporting Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Welcome and Opening Remarks</td>
<td>Mr. Mehul Sanghani, Chair</td>
</tr>
<tr>
<td>2. Approval of Minutes of November 16, 2020, Meeting</td>
<td>Mr. Mehul Sanghani</td>
</tr>
<tr>
<td>* 3. Resolution to Approve the Constitution and Bylaws for the Administrative and Professional (A/P) Faculty Senate</td>
<td>Mr. Mehul Sanghani, Ms. Holli Drewry</td>
</tr>
<tr>
<td>4. Future Agenda Items and Closing Remarks</td>
<td>Mr. Mehul Sanghani</td>
</tr>
</tbody>
</table>

* Requires Full Board Approval
OPEN SESSION

1. Welcome and Opening Remarks. Mr. Mehul Sanghani, Chair of the Governance and Administration Committee, will welcome committee members, guests, and invited participants.

2. Approval Minutes of the November 16, 2021, Meeting. The committee will consider for acceptance and approval the Minutes of the November 16, 2021, Meeting.

3. Resolution to Approve the Constitution and Bylaws for the Administrative and Professional (A/P) Faculty Senate. Ms. Holli Drewry, Chair of the Commission on Administrative and Professional Faculty Affairs, will introduce for committee review and approval the Resolution to Approve the Constitution and Bylaws for the Administrative and Professional (A/P) Faculty Senate.

4. Future Agenda Items and Closing Remarks. Mr. Mehul Sanghani, will discuss future agenda items for the committee. He will then offer closing remarks and request a motion for adjournment.
Welcome and Opening Remarks
By: Mr. Mehul Sanghani
Minutes

GOVERNANCE AND ADMINISTRATION COMMITTEE

November 16, 2020

JOINT OPEN SESSION WITH COMPLIANCE, AUDIT, AND RISK COMMITTEE

OPEN SESSION

Committee Members: Sharon Brickhouse-Martin, Anna James, Chris Petersen, Mehul Sanghani, Jeff Veatch (Zoom)

Other Board Members: Ed Baine, C.T. Hill, Carrie Chenery, Horacio Valeiras (Rector)

Board Representatives: Eric Kaufman, Camellia Pastore, Tamarah Smith, Sabrina Sturgeon

VPI&SU Staff: Lori Buchanan, Charity Boyette, Cyril Clarke, Al Cooper, Corey Earles, Kari Evans, Martha Glass, Kay Heidbreder, Sharon Kurek, Randy Marchany, Scott Midkiff, Ken Miller, Kim O’Rourke, Mark Owczarski, Dwayne Pinkney, Tim Sands, Tracy Vosburgh, and other guests.

The Governance and Administration Committee met jointly with the Compliance, Audit, and Risk Committee on Sunday, November 15, 2020, at 11:00 a.m. to discuss the following:

1. Briefing on Information Technology Security: Vice President for Information Technology and Chief Information Officer Dr. Scott Midkiff and Information Technology Security Officer Mr. Randy Marchany provided a briefing to the joint committees on the university’s information technology security posture.

The University operates under three IT security models: administrative, academic/instructional, and research. The challenge is creating an overall infrastructure that blends all three of these business processes’ security requirements. Virginia Tech operates under the shared responsibility model, with responsibility beginning with the user and enforcement coming from the top down; Individuals must comply with all IT related university policies and are responsible for their user IDs and devices, while departments and colleges work with the IT Security Office and the Office of Audit, Risk, and Compliance to ensure policy requirements are being met. Enforcement of security policies is delegated to the Vice President for Information Technology and Chief Information Officer, along with the Information Technology Security Office. University IT security faces
significant exposure from internal and external threats ranging from data theft and destruction, to attackers utilizing the organizational assets to attack others. In order to increase regulations and compliance requirements more resources and expertise is required. Mitigation measures to address the recent security issues found in the IT audit include minimum security standards, departments utilizing scanning tools regularly, introducing central endpoint management tools, creating a department action plan, providing more training for general users, conducting risk assessments, and improving efficiency of software procurement security reviews. From 2018-2020 there were 68 potential PII incidents, with only one actual exposure, and 20 ransomware incidents with only two successful attacks. To further assist in fighting incidents such as these, the division plans to employ a DNS Firewall, streamline IT risk assessments, track critical security controls, implement trainings and awareness campaigns, and emphasize analytics. The top three challenges faced by the division include in-house and vendor distribution risks, cybersecurity awareness among users, and software patching. Currently the IT Security Office and the Office of Audit, Risk, and Compliance are working together to assess risks and noncompliance, and the security office is working to ensure said risks are addressed. The Board of Visitors will receive and update on their progress at the June Meeting.

There being no further business, the meeting adjourned at 11:42 a.m.

**OPEN SESSION**

**Committee Members:** Mehul Sanghani (Chair), Chris Petersen

**Board Representatives:** Camellia Pastore, Sabrina Sturgeon

**VPI & SU Staff:** Whit Babcock, James Bridgeforth, Lori Buchanan, Bryan Garey, Martha Glass, Mike Goforth, Byron Hughes, Angie Littlejohn, April Myers, Lauren Naldo, Kim O’Rourke, Menah Pratt-Clarke, Chris Rahmes, Reese Ramos, Mark Rogers, Frank Shushok, Jon Clark Teglas

1. **Welcome and Opening Remarks.** Mr. Mehul Sanghani, Chair of the Governance and Administration Committee, welcomed committee members, guests, and invited participants.

2. **Approval the Minutes of the May 27, 2020, Meeting.** The committee approved the Minutes of the May 27, 2020, Meeting
3. **Update on Student-Athlete Physical and Mental Health.** Senior Associate Athletics Director for Student Athlete Services and University Relations, Mr. Danny White, with the help of the Virginia Tech Sports Science and the Clinical and Mental Performance teams, updated the committee on physical and mental health precautions and services available for student athletes.

The committee last received an update on the physical and mental health of student-athletes in November of 2018. Currently, Virginia Tech has a total of 569 student-athletes across 22 teams and 79 majors. Fifty-nine percent of student-athletes are male and 41% female, with 57% identifying as Caucasian and 43% as non-white. Currently 59% of athletes are out-of-state students, and there are 49 (9%) international students. According to the 2020 NCAA Gallup poll, student-athletes fair better in their sense of well-being both in life after college and during their undergraduate experience. To ensure Virginia Tech’s athletes feel the same, Athletics employs the Sports Medicine Team, led by Chief Medical Officer, Dr. Mark Rogers, and Associate Athletics Director for Sports Medicine and Head Athletic Trainer, Mike Goforth, and the Clinical and Athletic Mental Performance (CAMP) team, led by Associate Athletic Director, Dr. Gary Bennet. At the onset of the COVID-19 pandemic, Virginia Tech joined the ACC Medical Advisory group, which is comprised of all the Chief Medical Officers of schools within the conference. This group set the minimum standards for health and safety related to COVID-19 and its containment, regardless of differing state mandates. In response to COVID-19, the Sports Medicine Team follows a standard return to play (R.T.P) procedure that includes extensive cardiac monitoring and a re-acclimatization process before students are declared game ready. When student-athletes returned to campus, they were tested, quarantined for a short time, and then tested again two weeks later in order to ensure that each athlete received two negative results prior to reporting to practice. Testing is currently administered based on the risk of direct face-to-face contact. As such, high-risk sport teams, such as football and basketball, are tested three times a week, medium-risk sports teams, such as soccer and baseball, once a week, and low-risk teams, such as golf, at a 25% rate weekly. Testing is supported by the Fralin Biomedical Research Institute at VTC, as well as MAKO, which is under contract with the ACC. Currently, the team is utilizing GPS and heart rate monitoring technology to assist in this procedure in order to ensure physical distancing protocols at practices and monitor cardiac health, respectively. CAMP is partnered with Cook Counseling, but is located in the Athletics Department and devoted solely to support student-athletes. Demographics show that the number of student-athletes seen by Dr. Bennet’s team have understandably risen this year, with at least one athlete seen from each Virginia Tech team. Programs such as THRIVE and Hokies Helping Hokies Heal are also offered by CAMP to assist in mental well-being and community building. THRIVE, a workshop for female student-athletes, converted to an all virtual program this year and currently supports about 100 female athletes. Hokies
Helping Hokies Heal pairs injured athletes with those who have had similar experiences and come out on the other side. Mental health trends show that student-athletes are seeking treatment related to performance, depression, anxiety, ADHD, disordered eating, substance abuse, and other personal matters. In an effort to support student-athlete mental health in a physically distanced world, athletics currently has a partnership with the app, Headspace, and was working to form a similar partnership with Calm as well. However, the ACC was so impressed by our efforts, they are currently working to create a partnership with the app that will support all conference schools. However, these apps are not meant to take the place of face-to-face and telehealth sessions with the CAMP team; students still receive necessary treatments here on campus as needed.

4. **Introduction of the Director of the University Ombuds Office.** Recently appointed Director of the University Ombuds Office, Dr. Mauricio “Reese” Ramos, introduced himself to the committee and discussed his vision for the office.

With 19 years prior ombudsman experience in both the corporate and academic sectors, Reese Ramos joined Virginia Tech in July of 2019 and recently completed his inaugural year as the Director of the University Ombuds Office. Under his leadership, the office operates on four principles: 1) that every issue is unique and should be treated as such; 2) conversations are confidential unless they reference the harm of oneself or others; 3) discussions will occur in an informal setting free of concerns of investigation and reporting; and 4) all solutions are to be reached in an impartial environment. Reporting directly to the President, Dr. Ramos views the office as a safe place to brainstorm and reach effective solutions together. Issues handled by the office include conflicts between colleagues, roommates, students and faculty members, and supervisor and direct reports. Currently, the majority of visitors are faculty and staff members. However, this is likely to do the awareness that those groups possess about the office.

5. **HR Update: Impacts of COVID on the Workforce.** Vice President for Human Resources, Mr. Bryan Garey, provided an update on the University workforce and how it has been impacted by the COVID-19 pandemic.

In response to the pandemic, the university quickly began shifting employees off campus in March and early April. As a result, Human Resources had to adapt just as quickly in order to continue providing support to personnel. The division did so by embracing flexibility, providing additional resources, and continuing communication, while placing the highest value on the safety of Virginia Tech’s workforce. Due to the unknown financial impacts of COVID-19, the university moved to an exception policy for hiring and compensation increases, while also maintaining a commitment to preserve as many jobs as possible. By May, 80% of
the workforce was working remotely as the university moved to essential personnel only, having continued to pay student and non-student wage, and work study stipends until the end of the spring semester. At that time, Virginia Tech began to redeploy as many employees as possible who’s job duties were not conducive to telecommuting. Moving into summer, tensions were felt while trying to maintain operations with budgetary implications still unknown. As such, several budget reduction scenarios were introduced to prepare units across campus for possible cut backs, which have since occurred. Discussions also began around COVID-19 testing procedures, as plans to re-open the university were announced. Throughout the year, Human Resources continued to roll out various resources, managerial tools, telework practices, zoom consulting sessions, and child/adult care resources and outreach. In August, 43% of employees returned to campus, double the number of those who were present during the spring and summer months. Various wellness and communication resources have been made available to personnel with telework agreements in place, as well as mandatory testing practices for high risk employees due to the nature of their positions. Currently, one thousand employees are tested for COVID every two weeks, and the university is now offering volunteer testing for employees who are not high risk as well. HR also conducts a weekly operations analysis in which they monitor test results by senior management area in order to better assess risks. Some lessons that have been gleaned from this process include the longevity of telework, as flexibility is quickly becoming an expectation, which will in turn make the role of the manager more complex. We also must consider space needs in the future due to physical distancing. Questions to consider include how the university can align policies and practices related to pay, leave, and rewards to the post COVID-19 workplace, and how we can maintain the agility to align practices with the new “normal” in higher education.

Regarding HR initiatives introduced prior to the pandemic, the divisional director model is still being rolled out across campus, albeit it slowed due to budget setbacks. A new learning management system was launched in September for employee training, with thousands of sessions already completed, and plans are in place to house performance management on the same platform starting next year. Process improvements in Human Resources also continue with data analysis playing a key role and another climate survey likely to be sent out in 2021. Despite progress on these initiatives, risk is a still a serious concern, as this is a multi-year process and funding cuts are a high possibility.

6. **Inclusive VT Update.** Vice President for Strategic Affairs and Diversity, Dr. Menah Pratt-Clarke, updated the committee on Inclusive VT initiatives. She then introduced Vice President for Student Affairs, Dr. Frank Shushok, who shared on Inclusive VT initiatives currently underway in his department.
This year a major concern for the University has been risk mitigation due to the ongoing political climate. Dr. Pratt-Clarke discussed two virtual series launched by the Office of Inclusion and Diversity this year as part of the InclusiveVT initiative. Making the Chair Fit: A Conversation Series on the *Ut Prosim* Difference premiered its first episode on April 17, and centers conversations around people and programs that support diversity, equity, and inclusion at Virginia Tech. Since its initial streaming date, the series has released seven episodes, bringing in over 2,500 viewers with an average of 289 views per episode. Topics include conversations with members of Student Opportunities and Achievement Resources (SOAR), the Office of Inclusion and Diversity, Directors of the university’s Cultural and Community Center, President Tim Sands, and one on disability and accessibility. The VT Unfished series, which streamed during InclusiveVT week, features unfinished conversations on race and identity. The series, which premiered on September 9, contains three episodes on the topics of *The Little Book of Racial Healing*, *White Men Allies*, and *White Women Allyship*. Episodes have seen between 50-600 plus shares, with as many views, and an average view per episode of 234. The most popular episode of the series, *White Men Allies*, received over 3.2 thousand views. A new episode of the series is set to air the week following the committee meeting. The InclusiveVT Difference is set to be launched later this year to assist in fundraising for programs such as those previously mentioned. Additionally, Dr. Pratt-Clarke also shared the SOAR Coaching Report with the committee. Since the beginning of the fall semester, approximately 300 student meetings have occurred, with 78% percent of students needing academic support, 56% campus referrals, 36% financial or employment assistance, 34% personal and/or professional development, and 19% advocacy representation.

Following the InclusiveVT update, Dr. Shushok shared the inclusion and diversity goals set by the Office of Student affairs. First and foremost, the division promotes the well-being of all students in academic, personal, and social arenas alike. In an effort to do so, the office also aspires to increase multicultural awareness in order to achieve educational excellence, while also engaging community members in tough conversations through programs, forums, and experiences. Such conversations will be introduced in gracious spaces, which are areas in which students can take risks and ask the difficult questions via trust and honest dialogue. The division also plans to expand the concept of inclusion and diversity to include first-generation support, interfaith programs, international students, and services for those with disabilities and food security issues. Next year, Student Affairs will offer students the opportunity to participate in living learning communities, Generation One, for first-generation students, and Aurora, for interfaith students. The Division itself operates on the philosophy of pluralism; to not only support tolerance, but also understanding across differences. To help support these efforts, the Division of Student Affairs appointed Anthony Scott as
the Senior Associate Dean of Students and Director for Student Affairs Inclusion and Diversity in June of this year. This position serves to both provide information and programs throughout the university to further understand difference impediments, and to develop a strategy for the division to improve student engagement in an effort to develop cultural competency and effect advocacy. Overall, Student Affairs hopes to foster a dinner table environment where students feel safe to share and discuss, as well as remain sensitive to the fact that some institutional structures and polices may have to be reshaped as we continue to move forward.

7. **Future Agenda Items and Closing Remarks.** Mr. Mehul Sanghani, discussed future agenda items for the committee. He then offered closing remarks and request a motion for adjournment.

The committee would like to review any capital projects related to Athletics in a joint meeting with the Buildings and Grounds Committee. An impact analysis of the budget due to COVID-19 was requested from the Senior Vice President and Chief Business Officer, along with a report from Information Technology on the future state of technology and its alignment with the University strategic plan post COVID-19. The committee would also like an update on the child care situation that discusses future space and facility needs. Additionally, they would like to discuss aligning the Board’s strategic priorities with the university strategic plan and budget process, as well as receive updates on the Student Governance Task Force and the Corps of Cadets.

There being no further business, the meeting adjourned at 11:42 p.m.
Resolution to Approve the Constitution and Bylaws for the Administrative and Professional (A/P) Faculty Senate

WHEREAS, University Council approved the Establishment of an Administrative and Professional (A/P) Faculty Senate (CAPFA Resolution 2019-20B) on February 17, 2020; and

WHEREAS, a task group comprised of A/P Faculty members with representation of the constituent groups met and drafted the proposed Constitution and Bylaws for the Administrative and Professional (A/P) Senate; and

WHEREAS, the Commission on Administrative and Professional Affairs members have provided their feedback and recommendations;

NOW, THEREFORE, BE IT RESOLVED that the initial length of terms of the elected senators in the inaugural A/P faculty senate be designated by election results; and

BE IT FURTHER RESOLVED that the attached Constitution and Bylaws for the Administrative and Professional Faculty Senate be approved.

Recommendation
That the above resolution confirming the Constitution and Bylaws for the Administrative and Professional Faculty Senate be approved.

March 22, 2021
Virginia Tech Administrative and Professional Faculty Senate
Constitution and Bylaws

Constitution

1. Name

The name of this organization is the Administrative and Professional Faculty Senate (hereinafter referred to as the A/P Faculty Senate) of Virginia Polytechnic Institute and State University.

2. Authority

1. The A/P Faculty Senate derives authority independently through the voice and intentions of the Administrative and Professional Faculty (hereinafter referred to as A/P Faculty), as described in the Faculty Handbook.

2. The existence of the A/P Faculty Senate does not preclude the existence of or the right of any university employee to belong to any other organization.

3. Purposes

The purposes of the A/P Faculty Senate are:

1. To serve as the representative body for the A/P Faculty employees of the University.

2. To act in an advisory capacity to the University administration and governance.

3. To appoint or recommend A/P Faculty representatives to University Council, Commissions, Advisory Councils, Committees, and other ad hoc committees as appropriate.

4. To provide a medium for the exchange of information between A/P Faculty and the university community.

5. To foster a spirit of unity and cooperation.

6. To provide referrals for individual concerns and problems to appropriate organizations or personnel.

7. To accept and share responsibility with the administration, staff, faculty, and students in all efforts to attain the stated goals of the University.
4. Membership

1. The A/P Faculty Senate will initially consist of thirty voting senators elected from among the following constituent areas, as defined in the faculty handbook, at the university: Extension, Research, Academic Support, Student Affairs, Athletics, General Professional, and General Administrative.

2. There will be six possible non-voting members representing university organizations:
   1. One representative from the Staff Senate,
   2. One representative from the Faculty Senate,
   3. One representative from the Student Government Association,
   4. One representative from the Graduate Student Assembly,
   5. Past-President of A/P Faculty Senate, if no longer serving as a senator,
   6. The senior university administrator responsible for Human Resources or their designee.

5. Term of office

1. The term of office for A/P Faculty Senators will be three years. Each term will begin on July 1. Terms will be staggered to permit the election of approximately one-third of the Senate body each year.

2. Transfer of a member from one constituent area to another will result in the replacement of that individual by the elected alternate until a permanent replacement is elected.

3. Movement of a member within the same constituent area will not affect their unexpired term on the A/P Faculty Senate.

4. A senator may be reelected for up to two consecutive three-year terms. There are no restrictions on serving as an alternate.

5. Vacancies may occur as a result of termination of employment, transfer, retirement, resignation, or by a majority vote of the A/P Faculty Senate to remove a senator following three consecutive unexcused absences from regular meetings during any calendar year.

6. The retiring President of the A/P Faculty Senate will serve as a non-voting advisor to the Executive Committee for one year. If their elected term as a senator has expired, they will serve as a non-voting member of the A/P Faculty Senate and Executive Committee.
6. Elections

1. Elections by the A/P Faculty Senate will be conducted in accordance with the A/P Faculty Senate Constitution and Bylaws.

7. Officers

1. Elected officers of the A/P Faculty Senate will consist of
   1. President,
   2. Vice President,
   3. Secretary/Treasurer,
   4. Parliamentarian.

2. Officers will be elected annually by the A/P Faculty Senators. Each term will begin at the end of the June regular meeting.

3. Officers will be eligible for re-election but may not serve more than two consecutive terms in the same office.

4. The A/P Faculty Senate may, by a two-thirds vote of the A/P Faculty Senate membership eligible to vote and present at the meeting, remove any officer.

5. In the event an officer, excluding the president, will take office and for some reason be unable or unwilling to complete their term of office, a special meeting will be called and a special election held to fill the vacated office for the remainder of the vacating officer's term.

6. In the event that the president for some reason is unable or unwilling to complete their term of office, the Bylaws address how the vacancy is to be handled.

8. University Council, Commissions, Advisory Councils, and Committees

1. Senators and A/P Faculty representatives to the University Council and Commissions will be elected by the A/P Faculty Senate in accordance with the Constitution and Bylaws of the University Council by a simple majority vote of the A/P Faculty Senate eligible to vote and present at the meeting. Nominations for election may include A/P Faculty Senators-elect. Terms of office and procedure to fill vacancies in unexpired terms are prescribed in the Constitution and Bylaws of the University Council.

2. Senators from the General Administrative constituent area will not be able to represent the A/P Faculty Senate on University Council.

3. Nominations of senators and A/P Faculty employees requested by the President or other administrator of the University to serve on University Advisory Councils and Committees will be approved by a majority vote of the A/P Faculty Senate. Nominations may include Senators-elect. Terms of appointment and responsibilities are prescribed in the Constitution and Bylaws of the University Council.
4. Senators and A/P Faculty representatives to the University Council, Commissions, Advisory Councils, or Committees will
   1. Represent the position of the A/P Faculty Senate and A/P Faculty in the discharge of responsibilities,
   2. Inform the A/P Faculty Senate of pertinent matters to be considered and action taken by either
      1. Forwarding copies of meeting minutes to the Secretary/Treasurer within ten business days after approval of minutes by the respective University Council, Commission, Advisory Council, or Committee, or
      2. Summarizing discussions and actions taken at meetings of each University Council, Commission, Advisory Council, or Committee and forwarding to the Secretary/Treasurer within ten business days after each meeting if no official minutes are kept at the meeting, and
      3. Bringing matters of A/P Faculty concern before the respective University Council, Commissions, Advisory Councils, or Committees.

9. Committees

The A/P Faculty Senate will form the following committees. The charge of each will be defined in the bylaws.

   1. An Executive Committee consisting of the President, Vice President, Secretary/Treasurer, Parliamentarian, Chair of each Senate standing committee, and the past-President of the A/P Faculty Senate serving in a non-voting advisory capacity.
   2. Standing Committees will initially consist of
      1. Policies and Issues Committee,
      2. Communications Committee, and
      3. Elections and Nominations Committee.
   3. The President of A/P Faculty Senate may designate standing, special, and/or ad hoc committees as approved by the A/P Faculty Senate.

10. Quorum

A quorum of the Senate or one of its committees is defined as a majority of the total eligible voting membership of the Senate or committee, respectively. A quorum is
required at all A/P Faculty Senate and committee meetings in order to conduct business. Meetings may be held without a quorum, but votes cannot be taken.

11. Initial Adoption of the Constitution and Bylaws

The Constitution will be ratified by a simple majority vote of the Commission on Administrative and Professional Faculty Affairs’ voting members and by the University Council, President of the University, and Board of Visitors.

12. Amendments to the Constitution

1. Notice of a proposal to amend the A/P Faculty Senate Constitution will be given on the A/P Faculty Senate agenda and considered at no fewer than two meetings of the Senate prior to voting.
2. A copy of the proposed amendments will be distributed with the agenda.
3. A vote may be taken on an amendment at the second meeting.
4. A two-thirds affirmative vote of the membership is required for approval of changes followed by approval by the University Council and president of the university.
5. One-fifth of employees eligible for election to the A/P Faculty Senate may petition the president of the university to convene employees eligible for election to the A/P Faculty Senate to make changes to the A/P Faculty Senate Constitution.
6. Amendments to the Constitution will become effective upon approval by the membership, University Council and president of the university.

13. Amendments to the Bylaws

1. Notice of proposal to amend the bylaws will be given in the agenda and considered at not fewer than two meetings of the A/P Faculty Senate prior to voting.
2. A vote may be taken at the second meeting.
3. An affirmative vote of the majority of the membership eligible to vote and present at the meeting is required for adoption.
4. Amendments to the bylaws will become effective upon approval of the A/P Faculty Senate.

14. Corrections to the Constitution and Bylaws
Corrections of typographical/grammatical errors and updating terminology, where appropriate, are permitted without going through the amendment process for both the Constitution and Bylaws. These corrections should be noted in the changelog.

Bylaws

1. Duties of officers, senators, and non-voting members

   All officers are responsible for ensuring a smooth transition to their successor and an orderly transfer of official records.

   1. The President will
      1. Preside at all regular and special meetings.
      2. Enforce all regulations and policies.
      3. Preside over the Executive Committee.
      4. Prepare the organizational chart of the Administrative and Professional Faculty Senate (hereinafter referred to as the A/P Faculty Senate).
      5. Submit the budget at the July regular meeting for approval each year.
      6. Call special meetings.
      7. Prepare an agenda for the Secretary to distribute to the Administrative and Professional Faculty Senators and non-voting members seven days prior to the next regular meeting.
      8. Authorize disbursement of funds. (Such disbursements will be made by the Secretary/Treasurer.)
      9. Designate chairs of the standing committees in consideration of committee recommendation.
      10. Establish ad hoc committees as approved by the A/P Faculty Senate, appoint members and designate chairs of these committees as appropriate.
      11. Perform other such duties as associated with this office.
      12. Ensure a smooth transition to the president-elect at the end of the president’s term and an orderly transfer of official records.

   2. The Vice-President will
      1. Preside in the absence of the President.
      2. Serve as the principal assistant to the President.
      3. Serve as Chair of the Commission on Administrative and Professional Faculty Affairs of University Governance.
      4. Coordinate legislative activity.
5. Fulfill any term vacated by the President.
6. Perform other such duties as associated with this office.

3. The Secretary/Treasurer will
   1. Conduct a roll call, record attendance and advise the President if a quorum is present at the beginning of each meeting.
   2. Prepare minutes of all A/P Faculty Senate meetings and maintain them as permanent records.
   3. Distribute copies of the minutes to each member within ten days after meetings. The use of electronic mail is encouraged whenever possible.
   4. Distribute copies of agenda and information packages to each member within seven days prior to the next regular meeting. The use of electronic mail is encouraged whenever possible.
   5. Maintain all records of the A/P Faculty Senate including
      • Fiscal records,
      • Mailing lists (electronic and campus),
      • List of senators including term of office, and
      • List of senators serving on the University Council, Commissions, Advisory Councils and Committees including term of office.
   6. Make authorized disbursements of funds. Submit quarterly financial reports of expenditures to the Executive Committee. Both the President and the Secretary/Treasurer will authorize all payments.
   7. Perform other such duties as required by this office.
   8. Receive and retain the summaries and/or minutes from Councils, Commissions, and Committees on which A/P Faculty serve.

4. The Parliamentarian will
   1. Advise the President on parliamentary procedures in accordance with the parliamentary rules used by University Council, subject to special rules adopted by the A/P Faculty Senate to govern the procedures of the A/P Faculty Senate, cabinet, and standing committees.

5. The A/P Faculty Senators will
   1. Make informed decisions.
   2. Vote on matters brought before the A/P Faculty Senate.
   3. Serve on at least one standing committee.
4. Serve on University Council, Commissions, Advisory Councils and Committees when appointed.
5. Communicate to their constituent area on issues brought before the A/P Faculty Senate.
6. Seek opinions of their constituent area on pertinent matters concerning the A/P Faculty Senate.
7. Represent the position of their constituent area and be accountable to their constituent area.

6. The Alternate Senators should
   1. Attend A/P Faculty Senate meetings whenever possible.
   2. Vote only when their senator is absent.
   3. Serve on University Councils, Commissions, Advisory Councils, and Committees when appointed.

7. All members will attempt to attend meetings of University Councils, Commissions, and Committees to which they are assigned. If unable to attend the member will send an alternate if possible.

2. Elections
   1. The elections for A/P Faculty Senators, from the constituent areas will be conducted by the Commission on Administrative and Professional Faculty Affairs before March 31 each year. This process will be assisted and monitored by the Elections and Nominations Committee.
   2. The number of Senators elected will be from the following constituent areas:
      - Extension: 3 Senators,
      - Research: 3 Senators,
      - Academic Support: 6 Senators,
      - Student Affairs: 3 Senators,
      - Athletics: 3 Senators,
      - General Professional: 9 Senators and,
      - General Administrative: 3 Senators
      Each constituent area will elect a minimum of one alternate to serve on the A/P Faculty Senate.
   3. The Elections and Nominations Committee will begin taking nominations for President, Vice President, Secretary/Treasurer, Parliamentarian, representatives to the University Council, Commissions, Advisory Councils, and Committees and other appointments at the February regular meeting.
   4. Permission must be obtained from candidates before names are placed in nomination.
5. Election of officers will be held by April 1. Election and/or nomination of representatives to the University Council, Commissions, Advisory Councils, and Committees and other appointments will be completed by May 1.

6. A majority vote of those present and voting will be necessary to elect officers and/or representatives. In case no candidate receives a majority, the candidate receiving the fewest votes will be removed from each successive ballot until one candidate receives a majority.

7. All those elected will assume responsibilities at the end of the June regular meeting.

8. The Vice President will automatically be nominated for the office of the President when a vacancy in that office will be slated to occur. If the Vice President’s term on the A/P Faculty Senate is expiring or the VP refuses the nomination then the Elections and Nominations Committee will be charged with finding another nominee from among the members of the Executive Committee or Past Presidents of the A/P Faculty Senate whose terms on the Senate are not expiring. If no member of the Executive Committee or a Past president will accept the nomination, the Election and Nominations Committee will open nominations for President up to the current Senators.

3. Committees
   1. Executive Committee
      1. Screens proposals from A/P Faculty for A/P Faculty Senate consideration,
      2. Acts on behalf of the A/P Faculty Senate between regular meetings. All such actions will be reported for confirmation at the next Senate meeting,
      3. Approves, by majority of those eligible to vote and present at the meeting, initial composition, changes and additions to the membership of standing committees made by the President,
      4. Implements the rules and regulations of the A/P Faculty Senate,
      5. Assists in interpreting the intent of the A/P Faculty Senate Constitution and Bylaws,
      6. Determines if a senator's absence from a regular meeting is excused,
      7. Assists the President in preparing the budget,
      8. Meets at least once a month prior to the regular Senate meeting, and
      9. Addresses occasional changes to the regular meeting schedule of the A/P Faculty Senate.
      10. Is sensitive to the inclusion of employees who are representative of the various types of full and part-time A/P Faculty employees, occupational classifications, and organizational units.
2. Standing Committees

1. General Guidelines

1. Members of standing committees will be appointed by the President and approved by a majority vote of the Executive Committee. The President will also designate a chair for each standing committee.
2. Unless requested by the senator, membership on a standing committee will not change during the senator's term of office.
3. Each member of the A/P Faculty Senate will serve on at least one standing committee.
4. Minutes will be kept for each standing committee meeting. Each standing committee will also submit an annual report of its activities and any pending matters to the Executive Committee at the June Executive Committee meeting.
5. The scope of the charges of the standing committees will be established by the A/P Faculty Senate in accordance with the bylaws.
6. Standing committees will establish goals, objectives, and priorities. They have the authority to investigate, carry out activities necessary to perform their charges, prepare reports, offer recommendations, and make parliamentary motions.
7. Standing committees may establish subcommittees to address specific issues as needed. Membership of subcommittees will consist of members of the respective standing committee. Chairs of subcommittees will be appointed by the chair of the respective standing committee.
8. Standing committee chairs will convene their committees no less frequently than once a month unless approved by the Executive Committee.
9. At the end of each term, each committee chair will provide to the respective incoming chair appropriate information to facilitate continuity (e.g., charges, goals, unfinished business, investigatory materials, past and pending parliamentary motions).

a. Policies and Issues Committee - Primary Responsibilities
   1. Serves as a link between the A/P Faculty Senate and the Office of Human Resources and/or University Administration in general on personnel and related matters.
   2. Brings to the A/P Faculty Senate's attention changes in policies and procedures that may affect A/P Faculty and advises the Senate on these issues. This includes monitoring the activities of the
University Council, Commissions, Advisory Councils, and Committees that may affect A/P Faculty.

3. Provides assistance to A/P Faculty in obtaining educational leave, tuition waivers, and other educational opportunities.

b. Communications Committee - Primary Responsibilities

1. Coordinates communications to employees and the university community and supports the executive committee in matters pertaining to the Board of Visitors and the Virginia State Legislature as to the mission of the A/P Faculty Senate.
2. Communicates information to A/P Faculty concerning new employee orientation, employee training and development, incentives and rewards, benefits, retirement planning, and related matters utilizing university and non-university media and/or other appropriate means as needed.
3. Interfaces with university and non-university media sources to provide information on A/P Faculty Senate activities when appropriate.
4. Fulfills communications needs of the A/P Faculty Senate as requested by the President or Executive Committee.

c. Elections and Nominations Committee - Primary Responsibilities

1. Coordinates the A/P Faculty Senate elections process. Ensures that the A/P Faculty Senate Constitution and Bylaws are followed and deadlines are observed when electing Senate members, officers, and representatives to the University Council, Commissions, Advisory Councils, and Committees.
2. Compiles a list of nominations for A/P Faculty Senate officers and representatives to the University Council, Commissions, Advisory Councils, and Committees as needed.
3. Makes recommendations to the President for the appointment of members and chairs to A/P Faculty Senate committees.
4. Monitors elections of senators managed by the Commission on Administrative and Professional Faculty Affairs and oversees votes on proposed amendments to the Constitution and Bylaws of the A/P Faculty Senate.

4. Meetings
1. Regular meetings of the A/P Faculty Senate will be held on the 3rd Wednesday of each month. Occasional conflicts to this schedule, such as University holidays or inclement weather, will be addressed by the Executive Committee.

2. The A/P Faculty Senate will invite the President of the University to meet with the Senate at least once each academic year.

3. All meetings will be open to the university community unless the A/P Faculty Senate approves a motion to enter into closed session. However, a person who is not an A/P Faculty Senate member may not participate in the discussion unless recognized by the President of the Senate.

5. Procedures
   1. A/P Faculty employees may submit items to any senator for inclusion in the agenda of the next regular A/P Faculty Senate meeting. A senator wishing to have an item (or items) included on the agenda of a regular meeting may submit the item(s) to the President of the A/P Faculty Senate. The President will then decide whether items should be included on the next regular meeting agenda or passed to the appropriate Senate committee.

6. Parliamentary Authority
   1. The parliamentary rules used by University Council, subject to special rules as may be adopted by the A/P Faculty Senate, will govern the procedures of the A/P Faculty Senate, cabinet, and standing committees.
November 29, 2020

The Faculty Senate Cabinet reviewed resources related to the Commission on Administrative and Professional Faculty Affairs (CFA) Resolution 2020-21A: Resolution to Approve the Constitution and Bylaws for the Administrative and Professional (A/P) Faculty Senate.

The Faculty Senate leadership team is supportive of CAPFA Resolution 2020-21A and has no requested amendments at this time. Looking further ahead, though, the draft constitution may require revision in response to the ongoing work of the President’s Committee on Governance. Thank you for advancing shared governance at Virginia Tech!

Respectfully,

Eric Kaufman, President
Virginia Tech Faculty Senate
Administrative and Professional Faculty Senate Membership

- The A/P Faculty Senate will initially consist of thirty voting senators elected from among the following constituent areas:
  - Extension: 3 Senators,
  - Research: 3 Senators,
  - Academic Support: 6 Senators,
  - Student Affairs: 3 Senators,
  - Athletics: 3 Senators,
  - General Professional: 9 Senators and,
  - General Administrative: 3 Senators
Future Agenda Items and Closing Remarks
By: Mr. Mehul Sanghani